NEW EQUIPMENT DIGEST

A Penton Publication

October, 1957

Volume 22—Number 10

Copyright 1957 by The Penton Publishing Co.

CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 112

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

RHODIUM PLATING SOLUTION
plate has hard, bright finish

Base metal can be given a hard, brilliant, platinum - colored metal finish when plated with rhodium, available in solution form in unbreakable containers. A scale on the containers makes possible accurate measurement of contents. Rhodium is suited for decorative finishes, reflectors and mirrors, electrical contacts, wave guides, printed circuits, and jewelry. Company is equipped to refine residual plating solutions and reclaim rhodium from plating racks and wires. Solution and service available from **Metals & Controls Corp.,** General Plate Div., 1500 Forest St., Attleboro, Mass.

▲ For more details circle NED-1 K7 on enclosed inquiry slip ▲

LOW PRESSURE SWITCH
mounts in any position

Controlling or signalling small pressures, vacuums, or differential pressures is function of this low pressure switch. It is suited for control of movement of roll type air filters; pressure regulation of gas boosters; or switch operation of dampers, blowers, and gas-fired heaters. An independently adjustable automatic reset extends application to various automatic control uses. Switch mounts in any position, is unaffected by vibration, and fits into a 1½ x 3½ x 7½-in. area. Normal range is from 0.1 to 5 in. water, but other ranges can be supplied. Make and break contacts are adjustable to any point within these limits. Circuit is normally open or closed as desired. Operation is on up to 110 v ac or dc. Made by **Bacharach Industrial Instrument Co.,** 200 N. Braddock Ave., Pittsburgh 8, Pa.

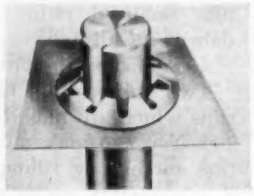
▲ For more details circle NED-2 K7 on enclosed inquiry slip ▲

SAW FILING VISE
for 4 to 18-in. circular blades

Circular saw blades from 4 to 18 in. diameter and with ½ to 1¾ in. arbor holes can be sharpened quickly and accurately on this model 346 filing vise. Blades are slipped over threaded stud assembly and are held firmly by a cone that engages stud threads when plunger is released. Cone is then turned for desired amount of tension, allowing blade to be rotated by file pressure to bring each tooth into position. Rigid back vise supports blade at filing point to prevent chatter. For large saws, a spring tension lever is swung down over blade for increased tension. Slotted angle adjustment bar stamped with 15, 30 and 45-degree markings guides filing. Made by **Foley Mfg. Co.,** Industrial Dept., 3600 N.E. Fifth St., Minneapolis 18, Minn.

▲ For more details circle NED-3 K7 on enclosed inquiry slip ▲

SPRING-STEEL FASTENERS
for shaft retention applications



Shaft preparation is not required with Springrip high carbon steel fasteners which slip over metal or plastic shafts, studs or rods and lock in place with strong spring tension. Pilot teeth guide the cone-shaped fastener onto the shaft and resist movement in an opposite direction by engaging the shaft around its full circumference. A full range of sizes is offered by **Illinois Tool Works,** Fastex Div., 195 Algonquin Rd., Des Plaines, Ill.

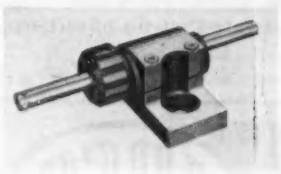
▲ For more details circle NED-4 K7 on enclosed inquiry slip ▲

MARKING DEVICE
is ball point tube in colored ink

Fast drying, opaque, heat resistant ink that makes lasting marks on metal, wood, plastic, and glass is packaged in a 6 x 1-in. ball point tube. Green, yellow, blue, orange, black, red, brown, and white inks will not chip, peel, fade, or rub off when applied to smooth or rough surfaces. Three ball points offered make 3/16, ⅛, and 5/64-in. wide lines. Made by **John P. Nissen, Jr. Co.,** Box 881, Glenside, Pa.

▲ For more details circle NED-5 K7 on enclosed inquiry slip ▲

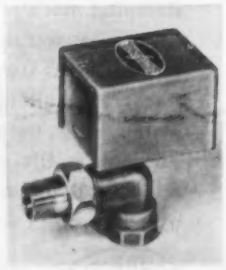
BORING BAR HOLDER
accommodates ⅜ to 1-in. bars



Utilizing the power feed on a lathe carriage, this boring bar holder is designed for quick mounting on the compound tool post. Simple repositioning of the eccentric assures optimum cutting results. Eccentric allows holder to be used on lathes with varying center heights. Holder, using a Universal collet, accommodates round boring bars from ⅜ to 1 in. diameter. Bar is adjustable for various depths. Collets can be supplied to accommodate square tool bits for use on counter bores and radii cuts. Made by **Universal Engineering Co.,** Dept. B, Frankenmuth, Mich.

▲ For more details circle NED-6 K7 on enclosed inquiry slip ▲

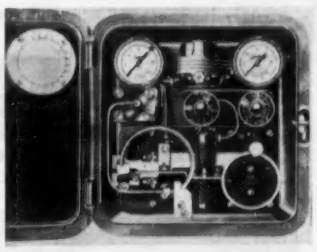
THERMOSTATIC VALVE
for individual zone heat control



Thermostatically controlled Zonvalve is attached to the radiator in place of the ordinary radiator valve to make possible individual zone heat control of plant areas or offices. It can also be installed at any point on the supply piping. The low voltage unit is powered by an electric motor which, when in "open" position, automatically actuates the burner or circulation system. Standard sizes are offered as a package which includes valve, thermostat, and transformer. Made by **Heat-Timer Corp.,** Dept. 217, 657 Broadway, New York 12, N. Y.

▲ For more details circle NED-7 K7 on enclosed inquiry slip ▲

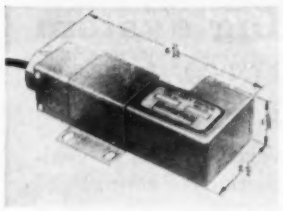
PRESSURE CONTROLLERS
mount on wall, panel, or valve yoke



Series of Wizard pressure controllers can be converted in the field to two-position controller, pressure transmitter, controller with remote set, and proportional plus reset controller. The standard proportional controller has a universal case for remote mounting on wall or panel, or for yoke mounting on a control valve. Bourdon tubes may be of bronze, alloy steel, or stainless steel in ranges from 25 to 10,000 psi. Proportional band is pneumatically adjustable from 2 to 100 per cent of Bourdon tube range. Reset action is adjustable over range of 0.03 to 27 minutes per repeat. Made by **Fisher Governor Co.,** Dept. NE-857, Marshalltown, Iowa.

▲ For more details circle NED-8 K7 on enclosed inquiry slip ▲

PROXIMITY SWITCH
detects ferro-magnetic objects



Detection of ferro-magnetic objects without direct contact with them is function of the 2FA1 proximity switch. Object passing through a magnetic field in front of its sensing end causes a signal to operate an integral or remote control relay up to 10 times per second. Switch can be mounted by an adjustable bracket on a surface that extends only 3¼ in. from material which operates it. Ferrous chips cannot actuate the switch which is potted and enclosed in a steel casing for protection against coolants, dampness, or dust. Switch operates on 100-125 v, 60 cps; draws 2 w; and has an "on" output of 12 v dc minimum into a 250-ohm load and an "off" output of 4 v dc maximum into a similar load. Made by **Minneapolis-Honeywell Regulator Co.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

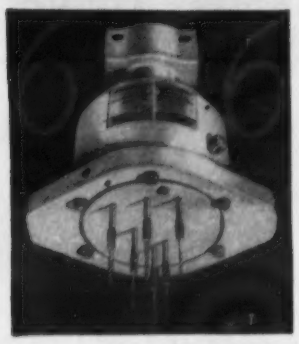
▲ For more details circle NED-9 K7 on enclosed inquiry slip ▲

DIRECTIONAL CONTROL VALVE
for hydraulic power applications

Rated 20 gpm, series VDP2 hydraulic directional control valves provide metering function in raising, positioning, rotating, holding, or lowering operations. Low pressure drop units are available in 1, 2, 3, 4, and 6-spool models for use on earthmoving, material handling, and other mobile equipment. A two-spool model is shown. Recommended operating pressure is up to 2000 psi. Open center parallel circuit design permits independent or simultaneous operation of two or more cylinders or hydraulic motors. Spool types, available in any sequence, include single and double-acting and float. They have spring return to neutral from operating position, or can have various detent arrangements. Integral differential type relief valve is externally adjustable. Made by **Parker Appliance Co.,** Dept. NE, 17325 Euclid Ave., Cleveland 12, Ohio.

▲ For more details circle NED-10 K7 on enclosed inquiry slip ▲

New Series 66 ZAGAR
GEARLESS DRILL HEAD



√ Multi-Hole Drilling
√ IN ANY MATERIAL
√ NEW LOW PRICE
√ Quick Delivery, Too!

Do you want to drill profitably up to 6 holes simultaneously? Here's our answer. For less complicated drilling (and tapping) jobs, up to 3½" spread, but for high production, Zagar's "66" fills the bill. Maximum drill diameter —⅝". You'll like both our deliveries and our price.

Turn over your hole problem to the Zagar representative—or, phone REdwood 1-0500 for his name. He'll come quickly.

ZAGAR, INC. 23880 LAKELAND BOULEVARD, CLEVELAND 23, OHIO

Zagar TOOLS FOR INDUSTRY and SPECIAL MACHINERY

▲ For more details circle NED-11 K7 on enclosed inquiry slip ▲

Continuous weighing system

Weighs material ELECTRONICALLY as it passes on a conveyer belt

Are your materials conveyed by belt to vehicles, mixers, or to other sections of your plant?

If they are, you know that the increase in automatic and rapid processing demands equally fast and accurate weighing.

The Electro Way Continuous Weighing System is an entirely new method of weighing using sound, proven principles.

Check these features

Versatility—(1) Measures material conveyed as a totalized weight and/or as rate of delivery.

(2) Controls flow by stopping conveyer automatically when specified load has been delivered or delivers material at a predetermined rate.

(3) Maintains accurate proportioning of multiple ingredients in continuous processing.

Accuracy—This is not a sampling or spot-weighing system—weight is measured continuously. Because of the unique electrical system, changing loads or uneven load distribution have virtually no effect on accuracy.

Compactness—System has 3 major components—weighing platform, measuring equipment and belt speed pickup. No floor space or superstructure is required. Shipping weight of popular size unit is approximately 300 lbs.

Trouble-free operation—Equipment is dust-tight and protected against vibration, heat, cold, and moisture. Designed for round-the-clock operation.

Simplicity of installation and maintenance—Installation can be made by the customer, or by Bell Automation Corp., if desired. Only connections between components are electrical wiring. An Operational Analyzer permits quick check of operating performance.

BELL Automation corp. A Subsidiary of Bell Aircraft Corporation

Write today for complete information.

BELL AUTOMATION CORP.
750 Monroe Ave., Rochester 7, N.Y.

▲ For more details circle NED-12 K7 on enclosed inquiry slip ▲

Our Circulation Policy

One of the most frequently asked questions by potential readers of NEW EQUIPMENT DIGEST is, "How can I obtain a subscription to your magazine?" The procedure is fairly simple, but a reader must qualify under our long-established circulation requirements.

According to this published circulation policy, the following restrictions must be met before an individual or company can qualify to receive NEW EQUIPMENT DIGEST monthly without cost:

1. The recipient must be in the general industrial field which includes manufacturing, processing, engineering and contracting, transportation, mining, public utilities, and mill supply distributors.
2. The individual must have a title or known function which would classify him in one or more of the following categories: Administration, Production, Plant Operation and Maintenance, Engineering, Design, or Purchasing.
3. The individual must be employed by a company listed in Dun & Bradstreet. The only exceptions to this rule are key men of railroad, steamship, and other transportation firms. Where a definite financial rating is unavailable, employment data is substituted.
4. Paid subscriptions are not accepted.

Two subscription blanks appear on the inquiry slips which are bound in this issue on pages 8 and 112. You can make application for a free subscription merely by filling out one of these coupons, if you qualify under our circulation policy.

A. N. Gregg
EDITOR

COFFEE VENDING MACHINE
coffee is always freshly brewed

Forty 16-cup percolators incorporated in the Perk-o-fresh coffee vending machine brew coffee as it is needed to assure peak freshness and flavor. The coffee, or hot chocolate, is served by an electronic Lazy Susan turntable which eliminates stooping and reaching. If coffee remains unsold, it is automatically drained and fresh coffee is brewed. Stainless steel, sealed interior insures absolute cleanliness. Unit requires only cold water connection and standard outlet. Leased by **Interstate-United Coffee Corp.**, Dept. N, 251 E. Grand Ave., Chicago, Ill.

▲ For more details circle NED-13 K7 on enclosed inquiry slip ▲

IPCO SAFETY VACUUM LIFTER

SPEEDS UP THE WORK— SAVES THE HANDS

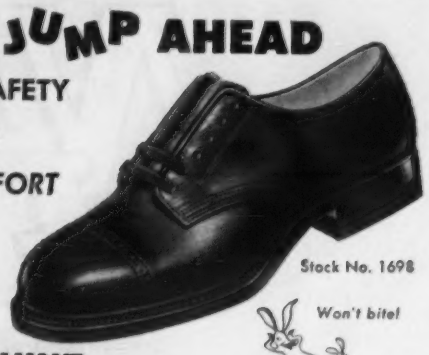
For punch press feeding, positioning blanks in stamping machines and die presses, separating or transferring sheets from piles or stacks . . . all non-porous materials . . . flat or curved surface . . . lifts and holds securely. Releases instantly by depressing thumb lever.

WRITE FOR BULLETIN NO. 33

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

▲ For more details circle NED-14 K7 on enclosed inquiry slip ▲

BIG JUMP AHEAD
IN SAFETY SHOE COMFORT



Stock No. 1698

Won't bite!

GENUINE kangaroo

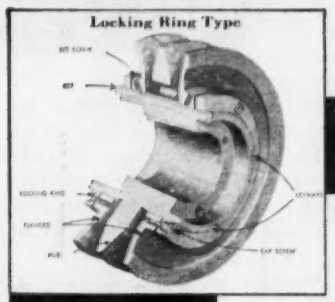
If ordinary safety shoes hurt your feet, try Genuine Kangaroo—favorite for over half a century in shoes built exclusively for comfort. The steel toe cap is designed to resist impacts UP TO A TON!

Soft and strong!

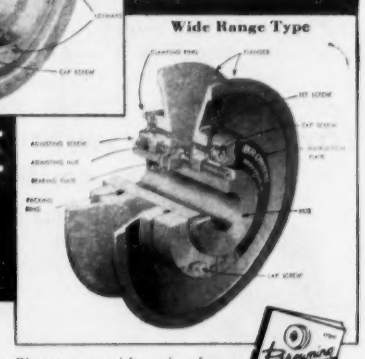
Nothing more comfortable on earth!

Lehigh SAFETY SHOE COMPANY
MINOR STREET
Emmaus, Pa.

▲ For more details circle NED-15 K7 on enclosed inquiry slip ▲



NEW . . . Browning



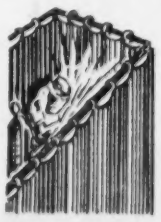
VARIABLE PITCH DRIVES

These rugged Browning Sheaves provide a simple, efficient method of speed control for drives up to 30 hp. Wide range and locking ring sheaves use Q, R or W wide range belts. Two groove locking ring sheaves use B or C belts. All locking ring type use same exclusive split taper bushing featured in Browning's entire line of V-drives, chain drives, couplings and paper pulleys. Details in illustrated catalog V-183. Ask your Browning distributor for free copy, or write **Browning Manufacturing Company, Maysville, Kentucky.**

Browning POWER TRANSMISSION EQUIPMENT

▲ For more details circle NED-16 K7 on enclosed inquiry slip ▲

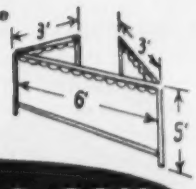
WELDING SCREENS



PROTECT *MERCHANDISE AND PERSONNEL*

Work needn't stop for welding with these safe, lightweight, portable screens. Shield merchandise and other workers from welding.

- **Treated Canvas, Asbestos or Neoprene**
- **Flame, Water, Weather and Mildew Resistant**
- **Nominal Cost—Based on Size**
- **Hinged for Portability**
- **Eyelets Hold Curtains in Place**
- **Curtains Easily Removed or Replaced**



Protect merchandise with Folding Loading Dock Covers. Stock sizes and specials.

A. MAMAUX & SON
120 BOULEVARD OF THE ALLIES
PITTSBURGH 22, PA. PHONE COURT 1-3500

Tarpaulins . . . 100,000 Square Feet in Stock

▲ For more details circle NED-17 K7 on enclosed inquiry slip ▲

NEW! DISCOVERY!
SAVES PLUMBING BILLS

★CLEANS INSTANTLY

Chicago — October 1st—Factories, Machine Shops, Offices including Home Owners are constantly having trouble with clogged-up pipes which proves expensive in Costly Plumbing Bills—

But now—using Water Impact and Air Pressure, here is a new unit called the **Plumber's Flushing Gun,** which cleans all lines up to 100 ft. It will open any number of bends in pipe. Yet anyone can operate this new gun, which triggers easily.

TOILETS, URINALS, SINKS, and FLOOR DRAINS clogged with paper, grease, rags, sand, and other debris can be cleared with one or more shots from the gun, **saving the owner, the Gun's price the first time it is used.** This new Flushing Gun may be used on any ½ to 6 inch waste pipe including Sink Drains, Floor Drains, Hot Water Pipes, Drinking Fountains, Septic Tanks, and Urinals. Obstructions melt away INSTANTLY when struck by the hammer like blow of this new unit.

AMAZINGLY EFFECTIVE

Hose attachment feeds water thru gun while air is released causing chain reaction in pipe cleaning the most stubborn stoppage.

This new Plumber's Flushing Gun is offered on a 30 Day Free Trial to prove its value. **BUT MOST IMPORTANT IS THIS**—What is this Tool worth to your Factory, Building, Machine Shop or in your own Home in **Costly Plumbing Bills Saved.** For your own good—Fill coupon right now—No agent will call—Obey that urge, mail now or write postcard. (Chicago Phone Kildare 5-1702)

MILLER SEWER EQUIPMENT INC. 4638 N. Central Ave., Chicago 30, Ill.
Please send FREE BOOKLET on Flushing Gun, I am not obligated.
NAME
FIRM
STREET CITY STATE

▲ For more details circle **NED-18 K7** on enclosed inquiry slip ▲

for die makers

Danly die stops, roller stock guides, guide rails and auto gages save time, labor and money. Why make them yourself when the big new Die Makers' Supplies Catalog lists choices that will meet your need. Costs far less, accurate, too. Available now from stock. Write for your supplies catalog today!

DANLY®

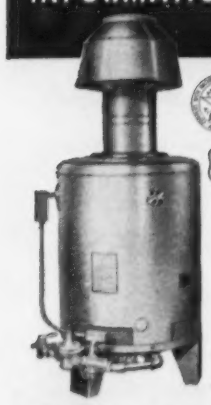
DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Ave., Chicago 50

▲ For more details circle **NED-19 K7** on enclosed inquiry slip ▲

Do You Have A Hot Water Problem?

FREE
Burkay HANDBOOK

GIVES YOU COMPLETE INFORMATION



HELPFUL FACTS
- Hot Water Requirements for Various Needs
- Sizing Tables
- Installation Diagrams
- Equipment Specifications
- Installation Instructions

Send for your free copy of handbook

MODEL 718/INPUT: 420,000 Btu/hr.
TYPICAL
Burkay gas-fired
Industrial Water Heater

Through research ...a better way
A.O.Smith
Permaglas Division, Dept. NED-1057
Kankakee, Illinois

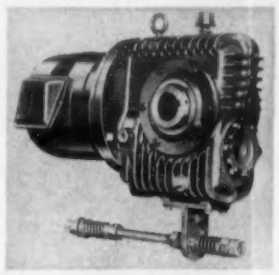
▲ For more details circle **NED-20 K7** on enclosed inquiry slip ▲

DOWEL PINS
offered as standard and oversize

Available in bulk and packaged quantities, Precision dowel pins are offered in standard size for new work, ground to 0.0002 in. over listed diameter, and oversize for redoweling enlarged holes, ground to 0.001 in. over nominal diameter. Hardened and ground pins are made in ⅛ to 1-in. diameters and in various lengths. Special sizes can be produced. Made by **Precision Steel Warehouse, Inc.,** Mfg. Div., 422 Maple Ave., Downers Grove, Ill.

▲ For more details circle **NED-21 K7** on enclosed inquiry slip ▲

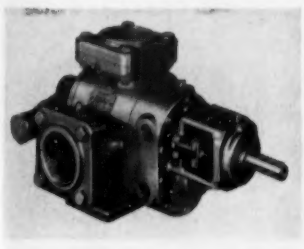
HOLLOW SHAFT GEARMOTORS
capacities range from 1 to 15 hp



High load capacity in the relatively small center distances of double-enveloping worm gearing is provided by this line of Cone-Drive hollow shaft gear motors. Shafts can be driven in any position with a floating power unit by use of a simple torque arm. Units are available with 1 to 15-hp NEMA D-flange motors, and output speeds range from 7.3 to 525 rpm in 27 increments with 1750-rpm motors. Drives are also supplied without motors by **Michigan Tool Co.,** Cone-Drive Gears Div., 7204 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle **NED-22 K7** on enclosed inquiry slip ▲

HEATED PUMPS
steam chest heats viscous fluids



Capacities from 27 to 223 gpm for use at up to 100 psi are available in 3600 series of pumps, equipped with a steam chest for handling viscous liquids. They can be truck-mounted or driven through an integral gear reduction by electric motor or gasoline engine. Steam chest is located between case and outboard bearing to transfer heat from steam, hot water, heat transfer oil, or radiator water to both pump and packing. Chest has two ¾-in. NPT ports on each side. Pumps are available with bronze bearings or in all-iron construction. All units have aluminum gaskets and high temperature packing. An adjustable relief valve is optional. Made by **Geo. D. Roper Corp.,** 615 Blackhawk Park Ave., Rockford, Ill.

▲ For more details circle **NED-23 K7** on enclosed inquiry slip ▲

this jack only "7" high

This "Shorty" jack (No. 1507) lifts 15 tons 2½ inches yet is only 7" high.

...will raise 15 tons

It has no fluids to leak, no cup leathers to wear out, no air or vapor lock—can be used sidewise, or upside down. It's a precision engineered, ball bearing screw jack with fully enclosed one piece malleable housing, seldom needs lubrication or servicing. Thousands of these easy to operate jacks are saving time and money wherever powerful lifting is required under low set loads. Ask your recognized distributor or write for bulletin AD-12-N, Duff-Norton Co., P.O. Box 1889, Pittsburgh 30, Pa.

DUFF-NORTON JACKS
"Giving Industry a Lift Since 1883"

▲ For more details circle **NED-24 K7** on enclosed inquiry slip ▲

HILD
TRANSFERABLE HEAD VACUUMS

Speed-up maintenance with Hild transferable head vacuums — ideal for all types of heavy volume or bulk vacuuming, including furnace, flue, and air conditioning duct cleaning. Powerful 1⅓ h.p. motor fits any 10, 15, 30, or 55 gallon drum — transfers from drum to drum in seconds for quick cleaning and water removal. Motors can be converted to blower or "Strap-Bak-Vac" for vacuuming in hard to reach areas.

Model 455
55 Gal. Vacuum
1 h.p

Model 655
55 Gal. Vacuum
2-2/3 h.p.

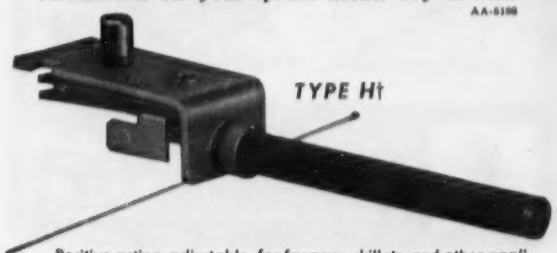
HILD FLOOR MACHINE COMPANY
NED-10-57
1217 Washington Blvd. • Chicago 7, Ill.
Write today for complete information.

▲ For more details circle **NED-25 K7** on enclosed inquiry slip ▲

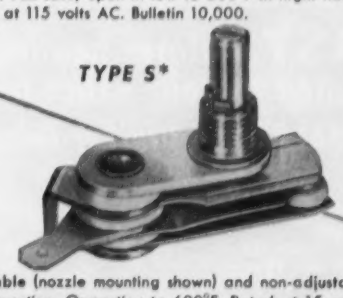
When you plan your product look to **STEMCO THERMOSTATS** *first*

With competitive conditions ahead, you're probably reappraising your product line. Or completely redesigning. Either way, that's the time to look into the Stemco thermostat line. Strip or disc types . . . positive or snap acting . . . adjustable or non-adjustable . . . virtually any type of terminal arrangement or mounting provision. No other line of bimetal thermostats has as many styles in production. This, combined with Stevens application engineering service, means you profit from important savings in being able to use production line Stemco thermostats for your special needs. Try us *now.*

AA-5108



Positive acting, adjustable, for fry pans, skillets, and other appliances. Fail-safe, open in low to 500°F in high. Rated at 1650 watts at 115 volts AC. Bulletin 10,000.



Adjustable (nozzle mounting shown) and non-adjustable styles. Positive-acting. Operation to 600°F. Rated at 15 amps at 115 volts AC; 7 amps at 230 volts AC. Screw and spade terminals. Bulletin 1000.

For laundry dryers or other surface and warm air applications. Snap-acting disc type UL approved for operation to 300°F. Rated at 25 amps at 120-240 volts AC. Open or enclosed styles. Bulletin 8000.

*Refer to Guide 400 EO for UL and CSA approved ratings.
†Patent Applied For

STEMCO
THERMOSTATS

STEVENS *manufacturing company, inc.*
Lexington and Mansfield, Ohio

▲ For more details circle **NED-26 K7** on enclosed inquiry slip ▲

OHIO
N&B
THE OHIO NUT & BOLT COMPANY

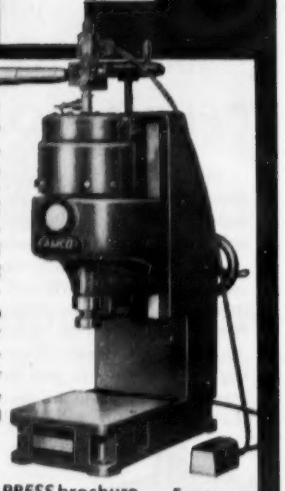
NEW 40-PAGE CATALOG

Tells how resistance welded fasteners cut costs, speed assembly and improve products. Gives typical applications and full dimensional information on 500 stock parts.

14 FIRST AVENUE • BEREA, OHIO

For more details circle NED-27 K7 on enclosed inquiry slip

IF



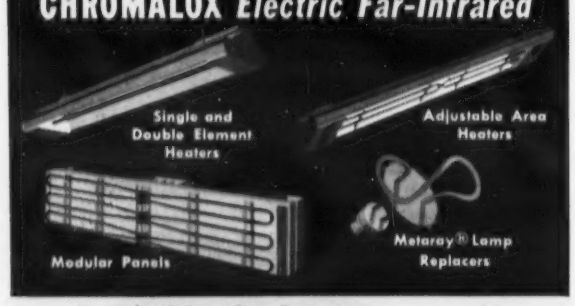
you want greater productivity, lower costs —Famco AIR PRESSES, single or double acting, are the answer. Every time-saving feature you need for trouble free performance has been incorporated in these precision built AIR PRESSES. 44 models to select from in ½ to 6 ton capacity. Bench and floor type. Available with electric or air controls, single or dual control type, pressure limit control, speed and timer controls.

Write for FREE Famco AIR PRESS brochure. Famco Model 236DE

famco machine company
3140 SHERIDAN ROAD • KENOSHA, WISCONSIN
AIR PRESSES • ARBOR PRESSES • BAND SAWS • DRILL PRESSES • FOOT PRESSES • POWER PRESSES • SQUARING SHEARS • MILLING MACHINES

For more details circle NED-28 K7 on enclosed inquiry slip

FAST uniform heating ...dialed to your exact need
CHROMALOX *Electric Far-Infrared*



Isn't this the heat you need?

- Fast . . . up to 75% faster than convection
- Uniform . . . no over- or undercuring
- Color-blind . . . absorbed almost equally by all colors
- Clean—safe . . . no fumes, no flames, no glare
- Accurately controlled . . . with infinite number of settings to match different jobs
- Unbreakable, all-metal, maintenance-free
- Easy and economical to put on the job

Chromalox Electric Far-Infrared is the answer

See ad on Page 75

FREE BULLETINS for each type heater. Tell us your needs and we'll give you specific recommendations. Write today. C-2107

Edwin L. Wiegand Company
7509 Thomas Boulevard, Pittsburgh 8, Pennsylvania

For more details circle NED-29 K7 on enclosed inquiry slip

NEW EQUIPMENT DIGEST

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

BPA NBP

Penton Building, Cleveland 13, Ohio

A. N. Gregg ..... Editor
H. J. Holtz ..... Assoc. Editor
Geo. Sotak Jr. ..... Assoc. Editor
J. W. Close ..... Circulation Mgr.
D. C. Kiefer ..... Marketing Director
F. O. Rice ..... Publisher
Walter Staab ..... Adv. Service Mgr.
A. Bugosh ..... Sales Prom. Mgr.
Betty Mercer ..... Adv. Prod. Mgr.

ADVERTISING REPRESENTATIVES

New York 17 ..... 60 E. 42nd St.—MUrray Hill 2-2581
B. R. Baker, G. M. Bernard
Philadelphia ..... 7 N. Drexel Ave., Havertown, Pa.—Hilltop 6-3199
V. W. Volk
Rochester 17, N. Y. ..... 66 Charlton Rd.—Congress 6-2322
G. F. Johnson
Cleveland 13 ..... Penton Building—MAin 1-8260
L. H. Weber, G. B. Guest, M. E. Olson
Detroit 35 ..... 15800 W. McNichols Rd.—BRoadway 3-8150
L. H. Weber, M. E. Olson
Chicago 11 ..... 520 N. Michigan Ave.—WHitehall 4-1234
W. J. Lowitz, J. M. Wells, John D. Schipper
T. Byrne O'Donnell
Griffin, Ga. ..... 1106 Pine Valley Rd.—Griffin 7854
Fred J. Allen
Dallas 23, Texas ..... 923 Cordova—DAvis 4-4016
Edward J. Wuetzle
Los Angeles 5 ..... 730 S. Western Ave.—DUnkirk 7-4388
Robert W. Walker Co.
Los Angeles 36 ..... 5943 W. Colgate Ave.—WEbster 1-6865
T. J. Fuller
San Francisco 4 ..... 57 Post St.—SUtter 1-5568
Robert W. Walker Co.

New Equipment Digest is published monthly by The Penton Publishing Co., Penton Building, Cleveland 13, Ohio. G. O. Hays, President; R. C. Jaenke, Executive Vice President; F. G. Steinebach, Vice President & Secretary; F. O. Rice, Vice President; J. P. Lipka, Treasurer & Assistant Secretary. Also Publisher of Steel, Foundry, Machine Design and Automation. Accepted As Controlled Circulation Publication at Cleveland, Ohio.

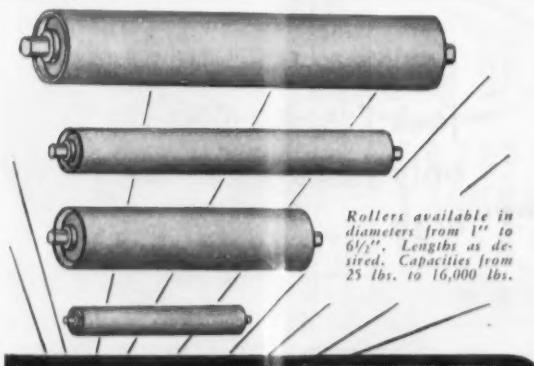
New Equipment Digest is sent without cost to engineering, specifying, or buying officials of companies listed in Dun & Bradstreet as a manufacturer or processer. It is also sent free to key executives of railroad, steamship, and transportation firms. It is not sent to salesmen, representatives, or other distributors. Paid subscriptions are not accepted. Qualified men can apply for a free subscription by filling out the coupon on the inquiry slip enclosed in this issue.

Publisher's Notice: We assume no responsibility for the validity of claims in connection with news items appearing in New Equipment Digest. Addresses are given to facilitate further inquiry.

HYDRAULIC PRESS
air-operated unit has four sizes

Capacities of 25, 50, 75, and 150 tons are available in this air-operated hydraulic shop press, suited for bending, straightening, and other press work. When the control knob is turned, the ram advances at high speed until it comes in contact with the work. It then automatically changes to the power stroke. Workhead is self-contained and is readily movable on roller bearings to center over the work. Ram has a 10-in. stroke. Workhead unit may be purchased separately. Made by **Dake Corp.**, 642 Seventh St., Grand Haven, Mich.

For more details circle NED-30 K7 on enclosed inquiry slip


Rollers available in diameters from 1" to 6½". Lengths as desired. Capacities from 25 lbs. to 16,000 lbs.

NEED ROLLERS?

Logan has available many types. Designed primarily for use in Roller Conveyor, but are suitable for numerous other purposes. Examples are machine parts, feed and guide rolls, truck beds, coil boxes, etc. Rollers are tubular type with ball bearings and either round or hexagon shafts. Bearings can be plain, dust protected, grease packed or pressure lubricated. Write for details.

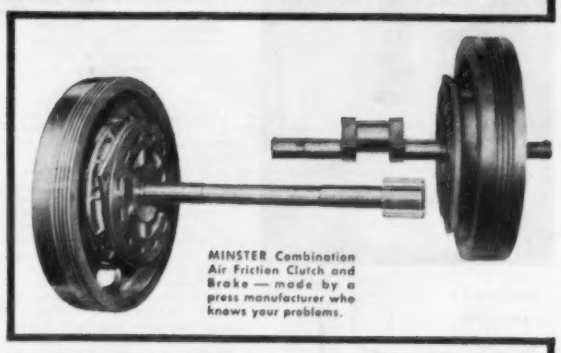
LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

Logan Conveyors

For more details circle NED-31 K7 on enclosed inquiry slip

TO INCREASE PRESS EFFICIENCY

MINSTER® CLUTCHES FOR PRESS CONVERSIONS


MINSTER Combination Air Friction Clutch and Brake — made by a press manufacturer who knows your problems.

Here's why it is profitable to convert to Minster Clutches:

- Eliminates down time because of clutch failure
- Reduces maintenance by eliminating costly and frequent parts replacement
- Increases die life because of smooth, shock-free clutch engagement
- Reduces operator fatigue and improves safety because press is easier to operate, easier to control
- More productive cycles per hour on single cycle operation
- Easier, more rapid die setting

Bulletin CC 57 describes Minster Clutches for press conversion. Copy by request on company letterhead.

THE MINSTER MACHINE COMPANY
MINSTER, OHIO

For more details circle NED-32 K7 on enclosed inquiry slip

THE SAFEST BLOWGUN YOU CAN BUY

No one who has been on the receiving end of a faceful of waste cuttings will deny that compressed air blowguns can be dangerous. Now, when working surfaces must be cleared of waste, chips and dust, SAF-T-AIR provides a clean sweep in seconds, with built-in protection. Operators are always shielded by a whirling screen of high velocity air, as particles are whirled down and out by SAF-T-AIR's exclusive cyclonic action. Waste won't rise more than an inch above a surface when simple instructions are followed.

AND SAF-T-AIR IS BUILT TO LAST.

CORROSION-RESISTANT, inside and out, for dependable service in spite of moisture in air-lines.
OPERATES AT FROM 30 TO 100 P.S.I. with positive, full on to full off air control furnished by hand size trigger.
WON'T CLOG. Extra large orifices pass rubber particles that jam other blowguns.

Eyes and Lungs are Priceless.

SAF-T-AIR Costs Only $6.95

extension nozzle for deep holes and crevices ..... $.60

Available at your local supplier or order direct from

E. V. NIELSEN, INC.
575 Hope St.,
P.O. Box 353, Glendale Sta.
Stamford, Conn.

For more details circle NED-33 K7 on enclosed inquiry slip

FIRST CLASS
PERMIT NO. 36
Cleveland, Ohio

BUSINESS REPLY ENVELOPE
No Postage Stamp Necessary if Mailed in the United States

—4c POSTAGE WILL BE PAID BY—

NEW EQUIPMENT DIGEST

Penton Building

CLEVELAND 13, OHIO

Only those having an engineering, specifying or buying title and connected with a company listed in Dun & Bradstreet as a manufacturer or processer are qualified to receive NEW EQUIPMENT DIGEST on our regular mailing list. The only exceptions to this rule are key men of railroad, steamship and other transportation firms. NEW EQUIPMENT DIGEST is not sent to salesmen, representatives or other distributors.

Only inquiries from individuals who qualify under the above classifications will be serviced if sent to us.

Important

Because we must check the distribution of NEW EQUIPMENT DIGEST at least once each year, please fill-in completely the coupon at the right. If you returned one of our regular mail questionnaires or an inquiry within the past year, you may omit this. The information you give will be held confidential and used only for verifying or correcting our circulation list.

PLEASE FILL IN COMPLETELY—PRINT OR TYPEWRITE

Please send NEW EQUIPMENT DIGEST to me each month free of charge.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Principal Products Manufactured _____

_____ Approximate Number of Employees in Plant _____

Also send NEW EQUIPMENT DIGEST free to the following men in our company:

NAME _____ TITLE _____

NAME _____ TITLE _____

USE THIS SELF-MAILER FOR MORE INFORMATION

FOLD — SEAL — MAIL

SECOND FOLD TO THIS LINE

Circle the Numbers Below corresponding to items on which you want additional information. Your request will be sent promptly to the manufacturer. Please fill in the coupon completely. We'll pay the postage.

	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051	1101	1151	1201
2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205
6	56	106	156	206	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206
7	57	107	157	207	257	307	357	407	457	507	557	607	657	707	757	807	857	907	957	1007	1057	1107	1157	1207
8	58	108	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208
9	59	109	159	209	259	309	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209
10	60	110	160	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210
11	61	111	161	211	261	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211
12	62	112	162	212	262	312	362	412	462	512	562	612	662	712	762	812	862	912	962	1012	1062	1112	1162	1212
13	63	113	163	213	263	313	363	413	463	513	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163	1213
14	64	114	164	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214
15	65	115	165	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215
16	66	116	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216
17	67	117	167	217	267	317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217
18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219

FOLD BOTTOM EDGE TO THIS LINE

20	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971	1021	1071	1121	1171	1221
22	72	122	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	972	1022	1072	1122	1172	1222
23	73	123	173	223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123	1173	1223
24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974	1024	1074	1124	1174	1224
25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225
26	76	126	176	226	276	326	376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126	1176	1226
27	77	127	177	227	277	327	377	427	477	527	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227
28	78	128	178	228	278	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228
29	79	129	179	229	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229
30	80	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
31	81	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931	981	1031	1081	1131	1181	1231
32	82	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232
33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
34	84	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234
35	85	135	185	235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235
36	86	136	186	236	286	336	386	436	486	536	586	636	686	736	786	836	886	936	986	1036	1086	1136	1186	1236
37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037	1087	1137	1187	1237
38	88	138	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
39	89	139	189	239	289	339	389	439	489	539	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189	1239
40	90	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240
41	91	141	191	241	291	341	391	441	491	541	591	641	691	741	791	841	891	941	991	1041	1091	1141	1191	1241
42	92	142	192	242	292	342	392	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192	1242
43	93	143	193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243
44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244
45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196	1246
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997	1047	1097	1147	1197	1247
48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248
49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199	1249

PLEASE FILL IN COMPLETELY

PRINT OR TYPEWRITE

NEW EQUIPMENT DIGEST

A PENTON PUBLICATION

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Principal Products Manufactured: _____

Approximate Number of Employees in Plant: _____

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

USE THIS SLIP FOR OCTOBER, 1957 ISSUE ONLY

K-7

WHERE R-B PUNCHES Cut Your Costs . . .

• IN DIE DESIGNING

. . . you save "board time" by working with the standardized R-B concept of punches, die buttons, punch retainers and die button retainers. R-B standardized equipment reduces drafting time to cut your costs.

• IN DIE CONSTRUCTION

. . . you save "building time" because R-B punches, die buttons, punch retainers and die button retainers are furnished completely finished. R-B saves skilled die-maker's time to cut your costs.

• IN DIE OPERATION

. . . you save "press time" because R-B punches and die buttons are instantly removed and replacements quickly inserted. Inherent accurate alignment and positive locking keep press down-time at a minimum to cut your costs.

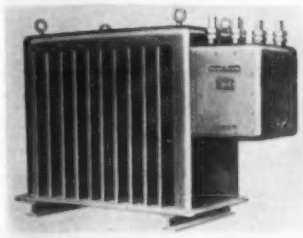
Use R-B Engineering Service for Your Tough Piercing Problems

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 75 • 26482 CAPITOL AVE. • DETROIT 39, MICHIGAN

Also Produced in OTHER ALLIED PLANTS
SPECIAL COLD FORGED PARTS • STANDARD CAP SCREWS
PRECISION GROUND PARTS • SHEET METAL DIES MADE OF FERROUS ALLOYS, ZINC ALLOYS OR PLASTICS

▲ For more details circle NED-34 K7 on enclosed inquiry slip ▲

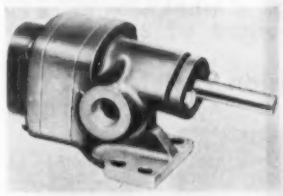
RECTIFIER POWER SUPPLIES offered in 50 to 500-kw capacities



Having approximately 95 per cent efficiency and voltage regulation within 5 per cent, oil-filled silicon power rectifiers are encased in oil and water-tight steel cabinets. They are available in 50, 100, 150, 200, 250, 400, and 500-kw capacities, with outputs up to 250 v dc. Made by **Norma-Hoffman Bearings Corp.**, Walker Div., Hamilton Ave., Stamford, Conn.

▲ For more details circle NED-37 K7 on enclosed inquiry slip ▲

ROTARY PUMP delivers 25 gpm at 500 psi



Continuous service at pressures to 500 psi is given by this heavy-duty rotary pump which is applicable to oil burner, high-pressure coolant, small hydraulic system, filtration, and circulation service. Line includes sizes 1 through 4 with capacities up to 25 gpm. Suction and discharge openings range from ½ to 1 in. N.P.T. Pump has nodular iron herringbone gears, four force-feed lubricated roller bearings, replaceable steel-backed bronze wear plates, and single stuffing box available with packing or mechanical seal for minimum leakage. Made by **Worthington Corp.**, 427 Worthington Ave., Harrison, N. J.

▲ For more details circle NED-38 K7 on enclosed inquiry slip ▲

VACUUM CLEANER used with 1½, 2, and 3-in. hose

Intake of model 515 vacuum cleaner, with 15-gal tank capacity, can be used with 1½, 2, and 3-in. hose. Operator can thus switch from 1½-in. hose for light general vacuuming to 2 or 3-in. hose for heavy or bulky material. Unit is powered by 1⅓-hp motor which can deliver 240 cfm air movement for maximum static pressure of 72 in. Motor detaches for use as portable blower, sprayer, or Strap-Bak-Vacuum. Made by **Hild Floor Machine Co.**, Dept. NE, 1217 W. Washington Blvd., Chicago 7, Ill.

▲ For more details circle NED-39 K7 on enclosed inquiry slip ▲

DUST

COLLECT IT WITH Hammond DUSKOLECTORS

CYCLONE

FILTER

Your plant produces dust in a surprising number of locations. By collecting it at the source you:

- Provide healthier working conditions
- Protect costly machines
- Reduce cleaning and painting costs

Hammond Duskolectors don't cost—they pay!

Clip this page to your letterhead. Duskolector catalog with helpful engineering information and interesting installation views will be sent at once.

See us at booth 1311, National Metal Exposition, Nov. 4-8.

Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

▲ For more details circle NED-41 K7 on enclosed inquiry slip ▲

FOR THOSE HARD - TO - REACH TURNINGS

NYE CHAIN WRENCH

SAVES TIME • EASES WORK

Perfect for work against walls, in corners, on parallel pipes. Needs less than ⅝" clearance. Takes positive grip. Solidly built. Forged alloy handle. Saves a lot of time on the job. Order today.

TURNS ANY SHAPE

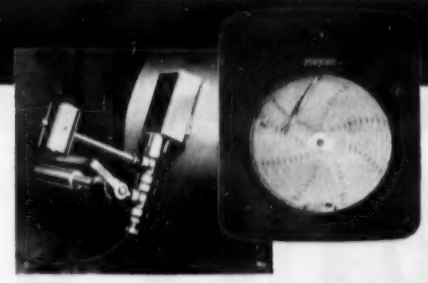
Round, square, hexagonal or octagonal, bars, pipe, conduit. No crushing.

Ratchet action takes each new bite without removing wrench from work.

NYE TOOL COMPANY
4126 WEST FULLERTON AVE., CHICAGO 39, ILLINOIS

▲ For more details circle NED-35 K7 on enclosed inquiry slip ▲

NOW! CONTINUOUS MEASUREMENT OF ROLL SURFACE TEMPERATURES



SPECIFICALLY DEVELOPED for calender rolls, dryer rolls and other moving surfaces used in processing . . . plastics, rubber, textiles, metals, paper, food. Saves steam, reduces waste, improves product quality.

The system consists of an entirely new type of measuring head . . . plus a Dynalog* Electronic Recorder or Controller. Minimizes ambient or radiant temperature errors. No scoring of the roll. Operating range: —40°F to +450°F continuous, up to +550°F intermittent. Write for Bulletin 405. **The Foxboro Company, 6610 Neponset Ave., Foxboro, Massachusetts, U.S.A.**

*Reg. U.S. Pat. Off.

FOXBORO Reg. U. S. Pat. Off. INSTRUMENTATION RECORDING • CONTROLLING INDICATING

▲ For more details circle NED-42 K7 on enclosed inquiry slip ▲

SOLVE your PROBLEMS of

WATER STEAM and FUEL TREATMENT

Economically! Dependably! with WESTERN CHEMICAL

To preserve your equipment and to keep it operating continuously, efficiently, and economically, is the purpose and end result of the use of specialized Western formulas and the individual technical service that goes with them. Whatever your water, steam or fuel treatment problem is, it can be solved by Western Chemical Company. That is our business and it has been for over 65 years.

ONE SOURCE FOR COMPLETE TECHNICAL ASSISTANCE

In the series of Western Technical Bulletins you will find the story behind your particular problem — its causes and prevention. Without obligation, take advantage of this opportunity which can lead to definite savings in both costs and headaches. Write today for complete information.

WESTERN CHEMICAL CO. 714 Washington St. Kansas City 5, Mo.

▲ For more details circle NED-36 K7 on enclosed inquiry slip ▲

The ALL AMERICAN Precision Filing Machine ASSURES 100% VERTICAL FILE POSITION REGARDLESS OF TWISTED FILE SHANKS!

This file setting square used in connection with the patented ball and socket joint file clamp compensates for irregularities in file shanks. A perfect filing job every time. Also saws and hones. Other features include: Precision ground table that tilts 15° front and back, chip blower, variable speed drive—from 170 to 450 strokes per min., lower overarm with file roller guide and slotted bronze saw guide, upper overarm with reciprocal file, saw and hone clamp. Finest machine of its kind. Send for literature.

$245.00 F.O.B. OUR PLANT
Illuminated magnifier or focal lamp, and sawing and honing attachments extra.

MANUFACTURERS OF ALL AMERICAN VIBRATION FATIGUE TEST MACHINES

ALL AMERICAN Tool & Manufacturing Co.
8044 LAWNDALE AVE., SKOKIE, ILL.

▲ For more details circle NED-40 K7 on enclosed inquiry slip ▲

ADAMS creates a Cyclone to give you Drier Compressed Air

The Adams Aftercooler and Cyclone Separator are a perfect team. The highly efficient aftercooler condenses more moisture . . . the separator's unique design creates a cyclone to remove more of the condensation.

Write today for all the facts . . . Get your copy of Bulletin . . .

R.P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

▲ For more details circle NED-43 K7 on enclosed inquiry slip ▲

TIME YOUR TESTS IN SPLIT-SECONDS!

GRA-LAB

ALL PURPOSE INDUSTRIAL TIMERS

MODELS AT $23.95 TO $29.95

You can set the large 8" dial for any desired time period within an unusually wide range of 3600 possible settings, (ie., 1 sec. to 60 min., 1 min. to 60 hrs., etc.). At end of preset interval, alarm sounds and external load is automatically switched on or off.

Gra-Lab Micro Timers, **Electric Stop Clocks**, are available in 1/10 sec. or 1/1000 min. graduations for split-second measurements of elasped time in laboratory or production operations. Price $37.50

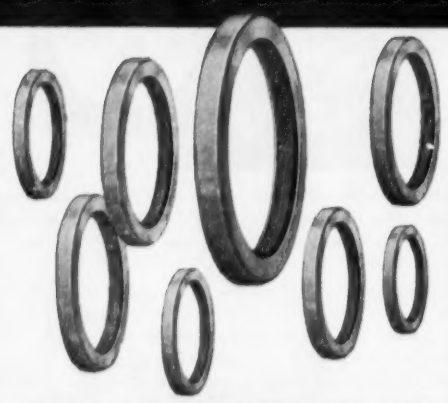
WRITE FOR COMPLETE CATALOG!

DIMCO-GRAY COMPANY 203 E. Sixth St. DAYTON 2, OHIO

▲ For more details circle NED-44 K7 on enclosed inquiry slip ▲

C/R

OIL SEALS



IN STOCK

ready for immediate delivery!

More than 20 types, forming over 7,500 size combinations for shafts from ¼" to 50" O.D. are available, the majority from stock.

C/R shaft type oil seals fit most seal applications, from simple dust exclusion to highspeed, high-temperature fluid retention under extremely rugged operating conditions where high sealing efficiency must be maintained over long service life.

So . . . check C/R . . . you'll find the seal to solve your problem, probably available for prompt delivery from stock.

This comprehensive catalog of stock C/R Oil Seals is ready for your use. Write for your free copy.

CHICAGO RAWHIDE MANUFACTURING COMPANY
1271 Elston Avenue Chicago 22, Illinois

Offices in 55 principal cities. See your telephone book.

In Canada: Manufactured and Distributed by Chicago Rawhide Mfg. Co. of Canada, Ltd., Hamilton, Ontario

Export Sales: Geon International Corp., Great Neck, New York.

C/R OIL SEAL DIVISION

CHICAGO RAWHIDE

▲ For more details circle NED-45 K7 on enclosed inquiry slip ▲

VIBRATION METER
makes record on paper chart

Permanent records of machinery vibration are made on a continuous paper chart by the Davey hand Vibrograph. The self-contained instrument measures amplitude and frequency, showing wave forms in minute detail. An external adjustment offers choice of 40, 20, 10, or 5 to 1 ratios. No battery or power source is required. A carbon shod ball bearing probe takes measurements directly on the surface of rotating shafts. Made by **Vibroscope Co.**, Dept. N, Box 97, Glenford, N. Y.

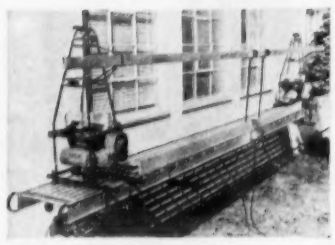
▲ For more details circle NED-46 K7 on enclosed inquiry slip ▲

DRUMS & BUCKETS
coated for corrosion resistance

Coated inside and outside with corrosion resistant Miccrosol vinyl plastisol, this line of drums and buckets is suited for storing and handling acids, caustics, plating solutions, and many corrosives. Coating is bonded to the steel and resists physical damage. Drums are available in 30 and 55-gal sizes, with or without welded handles. Buckets hold 5 gal. Made by **Michigan Chrome & Chemical Co.**, Coating Div., 275 Iron St., Detroit 14, Mich.

▲ For more details circle NED-47 K7 on enclosed inquiry slip ▲

POWERED SWING STAGE
driven by air or electricity

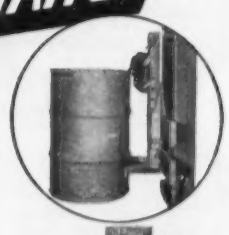


Steel constructed Hi-Climber swing stage and basket weighs 295 lb and has payload capacities of 675 lb. Lift drum has capacity of 395 ft of 5/16-in. wire rope and is powered by 1-hp G-E single phase 208-220-v motor, or by an Ingersoll-Rand multivane air motor. Level wind feature and grooved drum assure smooth level climb and descent without danger of unexpected jolts. Micro Switch prevents overloading. Unit has been approved by state, municipal and corporation safety engineers. Made by **Albina Engine & Machine Works**, 2101 N. Albina Ave., Portland 12, Oreg.

▲ For more details circle NED-48 K7 on enclosed inquiry slip ▲

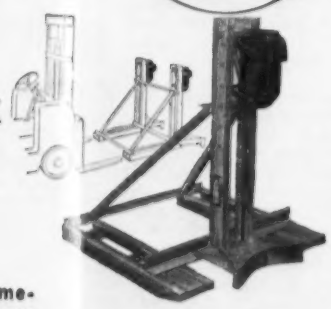
USE THE

LIFT-O-MATIC POWER TRUCK ATTACHMENT



for HANDLING DRUMS with a POWER FORK TRUCK

WITH FORKS LEFT ON OR REMOVED



Simple, automatic, mechanical handling of any size or type of drum—single or multiple.

WRITE FOR CATALOG

MARVEL INDUSTRIES, Inc.
2246 CLEVELAND ST., EVANSTON, ILLINOIS

▲ For more details circle NED-49 K7 on enclosed inquiry slip ▲

---

what...
7-minute delivery of etched, anodized metal nameplates?
Sounds impossible, BUT...

with Miller Dial's revolutionary new Fotofoil Kit, short run problems for nameplates, dials, panels, schematics and templates, are *solved* in just 7 minutes...and it's all done *in your own plant!* Fotofoil Kit requires no darkroom, skilled technicians or photographic equipment. This self-contained kit includes all necessary chemicals, equipment and Fotofoil to produce top quality product identification ...*in just a few easy steps!* Fotofoil is supplied in all standard anodized colors and thicknesses from .003. Designed for "crash" programs, research and development departments, prototype models.

Territories open for Industrial Suppliers

MILLER DIAL & NAME PLATE CO.
4400 N. TEMPLE CITY BLVD., EL MONTE, CALIF.
Offices in principal cities

▲ For more details circle NED-50 K7 on enclosed inquiry slip ▲

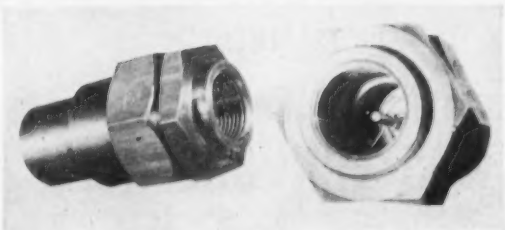
Pick the right paint for the job
FREE PAINT INDEX

Whatever your industrial painting problem, there's *one* paint especially formulated to give the *most effective* protection. With this handy guide, choosing that paint is simple and easy. Profitable, too, because the correct choice will wear longer, save you money on costly repaints. Write for your free money-saving Paint Index today!

TROPICAL PAINT COMPANY
1124-1234 W. 70th, Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883 • SUBSIDIARY OF PARKER RUST PROOF COMPANY

▲ For more details circle NED-51 K7 on enclosed inquiry slip ▲

PREVENT → *WASTE....* → *DANGER...*
WITH THE
SANDS SAFETY VALVE
FOR COMPRESSED AIR OR GAS LINES



THE SANDS SAFETY VALVE cuts off flow automatically whenever a hose or pipe breaks. This protects workmen from danger of explosion, poisoning or flying hose. It also prevents waste of valuable air or gas.

ALL SANDS SAFETY VALVES operate under pressure of 70 to 250 psi. Capacities are: 1", 90 to 185 scfm; ¾", 40 to 75 scfm; and ⅜", 15 to 30 scfm. (Other sizes on application.) They are made of brass with stainless steel springs. Spring bias design allows normal flow, but closes under abnormal flow. Bypass can be shut for use with dangerous or noxious gases.

SANDS SAFETY VALVE CO.
3606 FEDERAL STREET
DEPT. N., CAMDEN 5, N. J.

▲ For more details circle NED-52 K7 on enclosed inquiry slip ▲

LIQUID CO_2 REFRIGERANT ALLOWS −90° F. TEMPERATURE OPERATION FOR ENVIRONMENTAL TESTING

A new environmental test chamber, incorporating liquid CO_2 refrigerant for low temperature operation, is now being offered by Statham Development Corporation. The use of liquid refrigerant allows products to be tested down to −90° F. for extended periods of time. This chamber permits substantial savings in design evaluation time and in lowered production costs.

The Statham line of portable test chambers have proven their value for years in such fields as the Aircraft, Electrical, Electronic, Automotive and Chemical industries. They are available in four models: TC-2B with temperature range of −90° F. to +350° F.; TC-4B, ranges between −90° F. to +600° F. These units, employ dry ice or liquid CO_2 as a coolant. Other units are: TC-2A with a range from −75° F. to +350° F.; and TC-4 with a temperature range from −75° F. to +600° F. These latter units use dry ice only for cooling the test chamber. Accurate and adjustable control, wide temperature range, and a product capacity of 600 cubic inches provide the most versatile test chambers available for your testing needs. Prices range from $550.00 to $775.00, F.O.B., Los Angeles, California. Interchangeable extra trays may be ordered for greater convenience and elimination of loading delays. *Advt.*

Write on your letterhead for literature to:
STATHAM DEVELOPMENT CORPORATION, 12411 W. Olympic Blvd., Los Angeles, California.

▲ For more details circle NED-53 K7 on enclosed inquiry slip ▲

Zippertubing

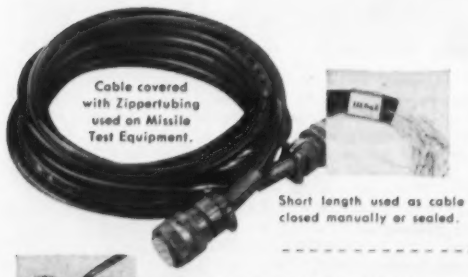
This revolutionary new zipper-style plastic tubing, "Zippertubing" is used to enclose, protect and identify multi-conductor wiring in the aircraft, electronic or electrical industries. The extreme simplicity and ease with which wiring can be encased will reduce the normal time spent on wire harnessing and cable covering by as much as 90%. With Zippertubing, a secure jacket can be applied in seconds and prevents abrasive wear on expensive custom cabling, or used as a substitute for lacing and tying, as wiring ducts, for wire marking, etc. When Zippertubing is used, the need for dilating conventional tubing is eliminated.

Zippertubing Cross Section of Standard Configuration for General Purpose Use.

Zippertubing is flexible, provides accessibility to work points, and offers ease of application. Zippertubing is available in nine colors, including black and clear plastic, and can be obtained in continuous lengths from 20 to 300 feet. When closed, it will withstand a linear strength test of 45 lbs. per inch and is available from ½" and above I.D. Additional strength available if required.

Zippertubing Cross Section of Military Configurations, Air Force Approved Construction.

Write today to find out how Zippertubing will reduce your time and labor costs. CALL THE DISTRIBUTOR OR REPRESENTATIVE IN YOUR AREA. HE WILL BE HAPPY TO DISCUSS YOUR APPLICATION.



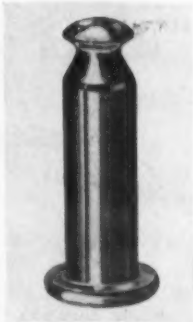
Short length used as cable marker—closed manually or sealed.

The broad applications, specifications and versatility of Zippertubing are completely described in this bulletin available to you. Write for it today.

THE Zippertubing CO.
Patented & Patents Applied For
752 S. San Pedro St., Los Angeles 14, Calif. • MI 0831

▲ For more details circle NED-54 K7 on enclosed inquiry slip ▲

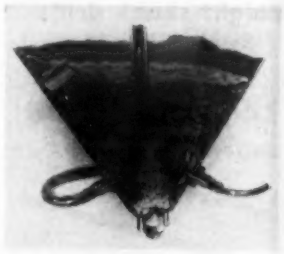
TITANIUM RIVETS
combine light weight, high strength



Titanium Hi-Shear rivets are available in production quantities in a full range of sizes. Rivets combine light weight with high strength for aircraft and missile applications under extreme environments. They have passed an extensive range of tests for shear, fatigue and tension, as well as metallurgical investigations. Accurate physical and performance data are available. Made by **Hi-Shear Rivet Tool Co.,** 2600 W. 247th St., Torrance, Calif.

▲ For more details circle NED-55 K7 on enclosed inquiry slip ▲

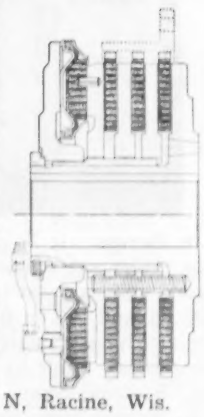
SLURRY AGITATOR
adapts to conical-bottom tanks



Fine abrasives are kept thoroughly slurried in water used in Hydro-Finish equipment by means of this Sluriator. Unit can be adapted to conical-bottom tanks by means of a conversion kit. It consists of a 4-in. diameter compressed air distributor, set between two heavy-gage, wear-resistant alloy circular plates. Two such fittings are installed at base of tank's sloping side walls, as shown. Agitating air sweeps tank bottom and spirals through body of liquid for thorough agitation of slurry. A take-off from a 80-90 psi compressed air line operates nozzle, and a needle valve regulates air flow through Sluriator heads at 6 to 10 cfm. Made by **Pangborn Corp.,** 140 Pangborn Blvd., Hagerstown, Md.

▲ For more details circle NED-56 K7 on enclosed inquiry slip ▲

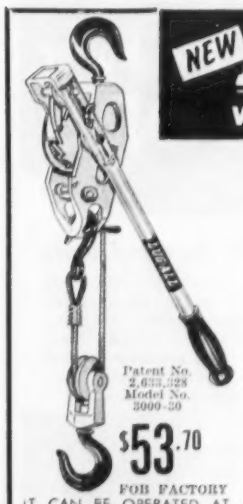
AIR CLUTCHES
single, double, triple plate types



Maximum torque of 3503 lb-ft is available in PO line of air clutches for various types of machinery and equipment. Single, double, and triple-plate constructions are available in 8, 10, and 11½-in. sizes. Cartridge type diaphragm is made of neoprene, reinforced with nylon. Constant torque capacity is provided without adjustment. Compact, narrow-width clutches permit use for replacement of drum or band clutches. They are suitable for air systems up to 130 psi. Made by **Twin Disc Clutch Co.,** Dept. N, Racine, Wis.

▲ For more details circle NED-57 K7 on enclosed inquiry slip ▲

NEW LUG-ALL® WINCH HOIST



Patent No. 2,633,328
Model No. 3000-30

$53.70 FOB FACTORY

1½ TON CAPACITY 30 FT. OF CABLE
WEIGHS ONLY 13¾ LBS.

Yes Sir, that's true. Users are well pleased with its performance, portability, versatility and compactness. Here are just a few of the jobs it can do for you:

- HOISTING-MOTORS-SHAFTS-GEARS
- TIGHTENING CONVEYOR BELTS
- PULLING CABLE THROUGH CONDUIT
- LIFTING VALVES INTO POSITION
- INSTALL HEAVY CHAIN HOISTS
- MOVING MACHINES

IT CAN BE OPERATED AT ANY ANGLE ON LIFTING, LOWERING, PULLING, TIGHTENING AND STRETCHING JOBS

★ **QUALITY CONSTRUCTION** Guaranteed For One Year
★ **NO BRAKES TO SLIP** Patented Interlocking Pawl System
★ **REVERSIBLE SAFETY HANDLE** Handle Bends When Overloaded
★ **ADVANCED DESIGN** Structural Type Protective Frame

LUG-ALL SPECIFICATIONS

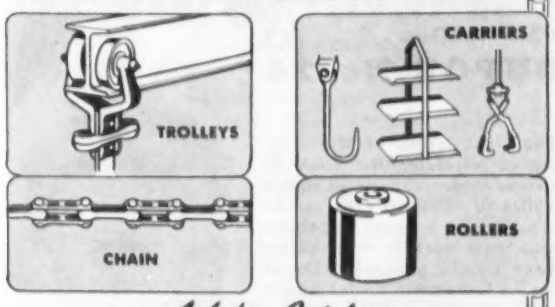
Model No.	DOUBLE CABLE Capacity in Pounds	Lifting Distance	SINGLE CABLE Capacity in Pounds	Lifting Distance	Weight	Price
4000-20	4000	10 Feet	2000	20 Feet	15 lbs.	$ 53.50
3000-30	3000	15 "	1500	30 "	13¾ "	53.70
3000-10	3000	5 "	1500	10 "	9 "	37.80
2250-38	2250	19 "	1125	38 "	13½ "	53.30
2250-15	2250	7½ "	1125	15 "	8¼ "	36.75
1500-25	1500	12½ "	750	25 "	9½ "	40.00

SPECIAL SALT-TESTED MARINE MODELS AVAILABLE FOR CHEMICAL PLANTS, MINE WORK OR FOR WHEREVER CORROSION PROBLEMS EXIST

THE LUG-ALL COMPANY, Haverford 6, Pa.

▲ For more details circle NED-58 K7 on enclosed inquiry slip ▲

WEBB CONVEYOR EQUIPMENT, PARTS and ACCESSORIES



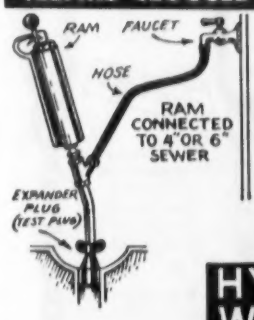
Ask for Catalogs

No. 50—Trolley Conveyors
No. 51—Floor Type Conveyors
No. 52—Power & Free Conveyors
No. 453—Hand Pushed Trolleys, etc.

JERVIS B. WEBB CO.
Conveyor Engineers and Manufacturers
8921 ALPINE AVE. • DETROIT 4, MICH.
Offices in Principal Cities

▲ For more details circle NED-59 K7 on enclosed inquiry slip ▲

CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, *vent or no vent!* Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone. Ideal for toilets, *plus* set of 5 tapered adaptor plugs for other drains or sewers.

Write for Information, Prices, Free Trial Offer — Today!
HYDRAULIC MANUFACTURING CO.
DEPT.-NED-10 KIEL, WISCONSIN

▲ For more details circle NED-60 K7 on enclosed inquiry slip ▲

Introducing

FASTWAY HAM-R-TOOL
and Stud-Pins
Save Time! Cut Hidden Costs!

- Eleven sizes of fasteners for anchoring light construction materials into brick, mortar, concrete, cement block, steel (up to ¼").
- New simplified method for fastening reduces hidden costs.
- More than a dozen exclusive performance features.
- Fastway Ham-R-Tool designed, engineered to out-perform, out-last, out-work anything you've seen.
- Five years' research makes possible this efficient, inexpensive tool and stud-pins for hundreds of applications.

Write today if you sell to contractors and to industrial plants.

FASTWAY FASTENERS, INC.
1676 E. 28th St.
Lorain, Ohio

Send me full details on the Fastway Ham-R-Tool and Fasteners.
☐ We are dealers
☐ We are contractors

Name _____ Title _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle NED-61 K7 on enclosed inquiry slip ▲

Working in a DUST BOWL?

YOU NEED . . .

DUPOR No. 24

The U.S. Bureau of Mines approved respirator that *filters the air and makes it clean!* 24 square inches of filtration area makes breathing a breeze! For those who must work in dusty places there is nothing quite like Dupor No. 24. Get details! Order sample today, $3.00 postpaid.

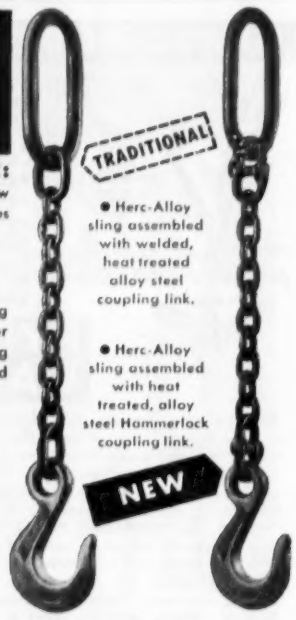
H. S. COVER, P. O. Box 2508
South Bend 14, Indiana
"Respirators for Industry since 1894"

▲ For more details circle NED-68 K7 on enclosed inquiry slip ▲

HERC-ALLOY®
. . . the original alloy steel chain

TO SERVE YOU BETTER:
Herc-Alloy chain assemblies can now be ordered with either of two types of coupling links.

Hammerlok®
the "do-it-yourself" reusable coupling link that enables you to assemble or rebuild your own Herc-Alloy sling chains with all components furnished by your local distributor.



● Herc-Alloy sling assembled with welded, heat treated alloy steel coupling link.

● Herc-Alloy sling assembled with heat treated, alloy steel Hammerlock coupling link.

CALL YOUR CM CHAIN DISTRIBUTOR or write for helpful literature on alloy chain assembly, care, use and inspection.

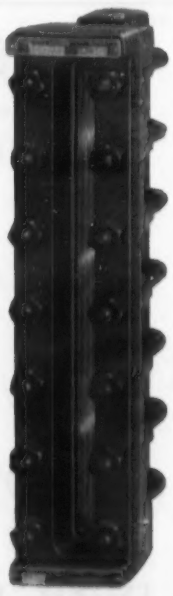
CM HOISTS AND CHAIN

COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
Regional Offices:
NEW YORK • CHICAGO • CLEVELAND
In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario

▲ For more details circle NED-69 K7 on enclosed inquiry slip ▲

Penberthy LIQUID LEVEL GAGES

for temperatures to 1000°F . . . pressures to 10,000 psi



Here's the complete line of accurate, easy-to-read liquid level gage sets (transparent and reflex) for all power, petroleum, and process industries. Line includes heating and cooling gages, frost-free, and welding pad gages, plus special accessories including instrument valves and non-glare lighting fixtures.

Exclusive features . . . experience-proved design . . . engineered construction make Penberthy gages durable and accurate. Order standard, or custom-made in carbon, stainless, and chrome-moly steels . . . monel, bronze or nickel.

PENBERTHY MANUFACTURING COMPANY
Division of Buffalo-Eclipse Corp.
1242 Holden Avenue, Detroit 2, Michigan

CATALOG 36 shows complete line of gages, valves, and accessories . . . free on request to Dep't. D.

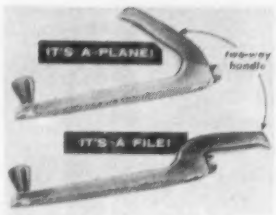
Everywhere you're seeing more PRODUCTS BY

PENBERTHY

- Ejectors
- Injectors
- Cycling pumps
- Electric sump pumps
- Liquid level gages
- Gage valves

▲ For more details circle NED-70 K7 on enclosed inquiry slip ▲

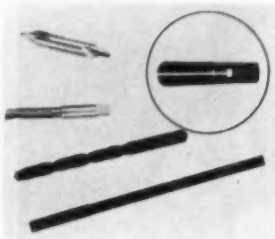
COMBINATION PLANE-FILE converts with two-way handle



Materials from soft wood to steel can be planed, filed, shaped, and smoothed with the Plane-'R-File. Conversion from plane to file is made by changing the two-way handle (see photo). Hardened steel blade with two rows of cutting teeth is capable of cutting wood, plastic, or metals. It leaves a smooth, even surface when cutting with or across the grain. Chips pass through openings between the teeth, making the tool nonclogging. Tool with coarse blade sells for $3.49 and replacement medium or coarse blades are 98 cents. Made by **Millers Falls Co.**, Dept. NED, Greenfield, Mass.

▲ For more details circle NED-71 K7 on enclosed inquiry slip ▲

SAFETY DRILL SLEEVES now made for straight shank drills



Minimum drill breakage, scored spindles, and damage to chucks result from using nylon drill sleeves, now available for straight shank drills in addition to taper types. Sleeve will break under sudden shock, yet it will withstand heavy speeds without distortion or tool slippage. Drill Saver is also usable with taps, counterbores, end mills, and other straight shank tools. Made by **James Products Co.**, 803 Mentor Ave., Mentor, Ohio.

▲ For more details circle NED-72 K7 on enclosed inquiry slip ▲

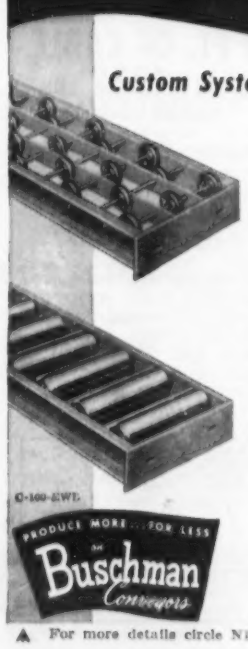
BULK MATERIAL BIN designed for intraplant handling

Carbon steel, hermetically sealed Tote Bin is available for intraplant handling of bulk materials where product contamination and container corrosion are

not factors. It is not suited for outdoor storing or for interplant operations. Container is made in the same sizes as standard aluminum Tote Bins: 42, 74, 90, 98, and 110 cu ft. Special sizes can be fabricated, as can bins of stainless steel, magnesium, and other materials. Made by **Tote System Inc.**, 710 S. Seventh St., Beatrice, Nebr.

▲ For more details circle NED-73 K7 on enclosed inquiry slip ▲

Buschman Wheel and Roller CONVEYORS



Custom Systems from Standard Units

Gravity conveying systems to meet your needs are set up quickly from Buschman wheel and roller components. Lightweight aluminum or steel construction and Quick-Eez coupling make rearrangement fast and easy.

Powered Beltevator and gravity roller or wheel conveyors can efficiently handle your high volume at low cost. Saves labor, from trucks to sales room to parking lot.

PRODUCE MORE . . . FOR LESS on Buschman Conveyors

THE E. W. BUSCHMAN CO.
4482 Clifton Ave. • Cincinnati 32, Ohio

▲ For more details circle NED-74 K7 on enclosed inquiry slip ▲

Corrosion-Resistant DRUMS coated with MICCROSOL

55 gallon drum, coated with Miccrosol . . . . . $55 (without handles $50)

30 gallon drum, coated with Miccrosol . . . . . $35 (without handles $30)

5 gallon bucket, coated with Miccrosol $5

Prices F.O.B. Detroit Other sizes available upon request

Now you can get full size drums and buckets, coated inside and out with corrosion-resistant Miccrosol.

They're ideal for storing acids, plating solutions, and all types of corrosives. Just right to use when making up plating solutions.

Heavy Miccrosol coating will resist all corrosive action. Securely welded handles are convenient for easier handling. Can also be ordered without handles, if you prefer them that way.

You'll find many uses for these sturdy, corrosive-resistant containers.

MICCRO Products

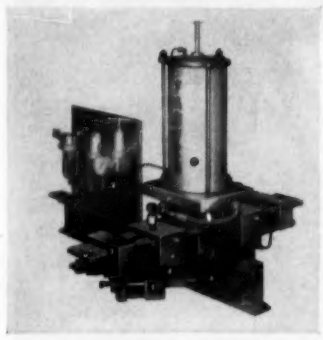
Developed and manufactured by experienced platers and coaters

Order the sizes you need from

MICHIGAN CHROME *and Chemical Company*
275 IRON STREET, DETROIT 14, MICHIGAN

▲ For more details circle NED-75 K7 on enclosed inquiry slip ▲

Automatic CONVEYOR LUBRICATORS

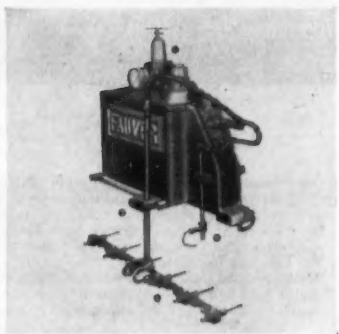


700 series

1. Lubricant Reservoir.
2. Air Control Panel — can be remotely located — includes filter—regulator —lubricator unit.
3. Frame: Supports lubricating mechanisms — simple adjustments for quick and correct location of pumping units.
4. Cam: Locates nozzle in correct pick-up position, provides means for locking in non-operating position.
5. Booster Air Cylinder operates high pressure lubricant piston.
6. Nozzle—Pick-up Assembly

model 112X

1. Two gallon reservoir.
2. Crown Regulator & Lubricator.
3. Tripping Arm — triggered by trolley wheel, oil is fed into air stream, drop-by-drop to form a fog (no dripping).
4. Steel Manifold.
5. Spray Nozzles lubricate wheel bearings.



model 114X

Automatically lubricates, single or double chains of slat-type conveyors. Air enters reservoir through a regulator—valve opens by cam action—the tripping mechanism is actuated by wheels or link pins passing the lubricator.

ADVANTAGES
Reduces power consumption.
Saves Lubricant.
Reduces conveyor repairs.
Saves down-time & labor.

model 115X

A continuous spray lubricator for chains only—air passes through a solenoid valve into the lubricator chamber, valve is wired on the inlet to the starting switch—therefore continuously lubricates as long as chain is in motion.

Send for eight-page catalog No. CL956 which describes and includes engineering data on six different models.

J. N. FAUVER CO., INC.
47 W. HANCOCK DETROIT 1, MICH.

▲ For more details circle NED-76 K7 on enclosed inquiry slip ▲

SPIROL- the true spring pin

available in

NON-HEAT-TREATED METALS

SPIROL is the only spring pin available in such metals as nickel stainless steel, brass, and other non-heat-treatable metals. The SPIROL construction permits use of less resilient metals because stress is evenly distributed throughout the spiral—*no critical crossection*. Only SPIROL's unique radial spring action provides high resistance to shock.

SPIROL ADVANTAGES

Non-heat-treated metals can be used for applications requiring:

- extra corrosion-resistance
- high conductivity
- non-magnetic properties

Free! Spirol Pin data and sample pins. Write today.

C. E. M. COMPANY • 88 SCHOOL ST. • DANIELSON, CONN.

For more details circle NED-77 K7 on enclosed inquiry slip

DoALL *CLAW-TOOTH*

...New Premium Saw Blade At REGULAR Prices

Try it ....

POSITIVE TOOTH RAKE ANGLE

FASTER, EASIER CUTTING OF ALL MATERIALS . . . EXTRA LONG LIFE . . . GUARANTEED ± .002" TOOTH SET ACCURACY . . . SMOOTH, BURR-FREE FINISH . . . REDUCES INVENTORY . . . UNCONDITIONAL GUARANTEE!

DoALL "claw" teeth literally *pull* themselves into the work for fast, easy sawing.

There's a DoALL band saw blade for every job . . . but the blade that does *more* jobs *better* is the DoALL CLAW-TOOTH! Both CARBON STEEL or HIGH-SPEED STEEL blades have exclusive DoALL positive tooth rake angle—for faster cut-off or contour sawing with any band machine. Available in blade widths of ¼" to 1", with 2, 3, 4 and 6-pitch. Reduce sawing costs and blade inventory—specify CLAW-TOOTH in custom lengths to fit your machines, or in 100' or 500' coils in convenient "strip-out" containers.

Call DoALL locally today for details, or send for FREE Band Tool Catalog describing complete line of DoALL saw blades.

SB-59

DoALL

THE DoALL COMPANY

Des Plaines, Illinois

"Visit our Booth No. 360—Metals Show, Chicago, November 4-8."

For more details circle NED-78 K7 on enclosed inquiry slip

New Savings in Protective Coatings with Mono-Seal

Mono-Seal is a super-tough, plastic-type coating. Lasts longer. Saves labor. Produces almost indestructible finish for . . . TRUCKS • WALLS • PIPES • FLOORS MACHINES • SAFETY LINES — Against fumes, spillage, submersion, abrasion, impact. Tested and proven for over 4 years — Withstands corrosives, steam, chemicals, etc. Elastic. No chipping or peeling.

Send for New **FREE BULLETIN!**

Get all the details on this versatile coating, *now!*

D-H **Mono-Seal**

MONO-SEAL PRODUCTS • 50 GARDEN ST. • EVERETT 49, MASS.

For more details circle NED-79 K7 on enclosed inquiry slip

SHAFT-MOUNTED DRIVE

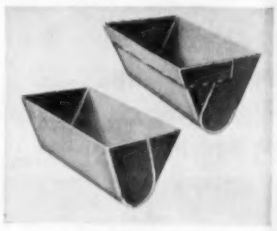
single and double reduction ratios

Single reduction ratio of 5:1 and double reduction ratios of 14:1 and 25:1 are offered in the all-steel 315J shaft-mounted drive. Ratings range from 2 hp at 5 rpm to 50 hp at 359 rpm. Maximum torque rating at low speed shaft is 31,000 lb-in. Long center distance between shafts permits use of large sheaves on installations where the unit is mounted with input shaft toward the driven machine or on through-shaft applications. Inspection covers facilitate viewing of bearings and helical gears. Oil level is checked with an automotive type dip stick. Made by **Falk Corp.**, Dept. 255, 3001 W. Canal St., Milwaukee 1, Wis.

For more details circle NED-80 K7 on enclosed inquiry slip

ELEVATOR BUCKETS

are lightweight welded steel

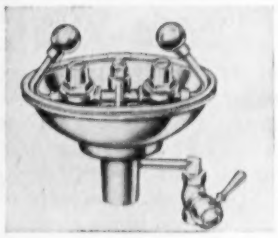


Brake-formed from a single shaped steel plate, J welded elevator buckets are light in weight, strong, and durable. Corners are rounded, smooth, and free of irregularities to assure fast, clean discharge of load. They are available in type A, AA, and AA-RB sizes, as well as in special shapes and sizes and of alloy or stainless steel to order. Made by **Wincar Welders,** 3249 Cherry Ave., Long Beach, Calif.

For more details circle NED-81 K7 on enclosed inquiry slip

EMERGENCY FOUNTAIN

reduces chemical injury to eyes



This model 8933 emergency fountain instantly washes eyes and face that have been splashed with chemicals or other injurious matter. Two controlled streams of water project from special fountain heads to flush the eyes, while numerous jets of water spurt from the circular face-wash ring. Model can be equipped for manual or foot treadle operation and can be wall mounted, pedestal mounted, or installed in conjunction with existing water installation. Fountain bowl is stainless steel, whereas heads are chrome plated brass. Made by **Haws Drinking Faucet Co.,** 1429 Fourth St., Berkeley 10, Calif.

For more details circle NED-82 K7 on enclosed inquiry slip

Multiform

BIG BROTHER BENDER

Illustrated above are a few of the many forms that can be produced efficiently on the Multiform Bender.

Model BBB

SMALLER MODELS AVAILABLE

AIR OPERATED MODELS IN FOUR SIZES

HYDRAULIC—3 MODELS

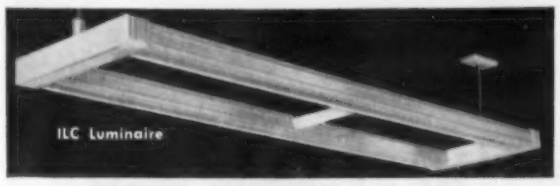
The heavy duty Big Brother Bender is designed for fabricating bus bars, brackets, fixtures, etc., without special tooling. Air controlled with finger tip response. Comes complete with dies, mandrels and wrenches—punching and blanking dies extra. Will punch holes up to 1" and form material up to ¼" thick by 4" wide. We also build smaller models, hand or air operated, for bending materials up to ⅛" x 1½".

Send for illustrated folder M6

SEE AT BOOTH 1497 METAL SHOW CHICAGO

J. A. RICHARDS CO. Myrtle & Pitcher Sts. Kalamazoo, Mich.

For more details circle NED-83 K7 on enclosed inquiry slip



NEW CONCEPT IN FLUORESCENT LIGHTING

- High level indirect illumination
- For fluorescent lamps from 7,250 to 13,000 lumens
- Available from Graybar

The new I.L.C. Luminaire uses fluorescent lamps to deliver lighting levels of 150 footcandles or more . . . with a high degree of comfort. Exceptional efficiency means low initial and operating costs for working area in offices, schools, and commercial interiors.

You'll need this latest bulletin on Indirect Luminous Ceiling, by Silvray, available from Graybar. Contains handy tables of dimensions and ratings. Specific examples showing how to figure systems for given intensities. Ready now. Write for YOUR copy. 752-2810

Graybar Electric Company, Inc.
420 Lexington Ave., New York 17, N. Y.

Call Graybar *first* for . . .

IN OVER 130 PRINCIPAL CITIES

GRAYBAR Everything Electrical GraybaR ELECTRIC COMPANY

For more details circle NED-84 K7 on enclosed inquiry slip

RECEIVING...PRODUCTION... WAREHOUSE...SHIPPING... MAINTENANCE

every department can use the CM CYCLONE HIGH-SPEED—HEAVY DUTY—ALUMINUM ALLOY CHAIN HOIST

CAPACITIES: ¼ TO 10 TON

● Help your men get lifting jobs done quicker, safer, with less physical effort. Increase labor dollar return. PORTABLE—Carry with one hand. EASY OPERATION—Less hand chain pull. LOW HEADROOM—Highest possible lift. CM-ALLOY flexible welded load chain. Lifetime lubrication. *More CYCLONE Hoists are in use today than any other hoist in their class.*

CYCLONE CATALOG NO. 145

Illustrates, describes and prices all models. Sent on request or ask your CM Distributor.

CHISHOLM-MOORE HOIST DIVISION

COLUMBUS McKINNON CHAIN CORPORATION

TONAWANDA, NEW YORK

DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND

In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONT.

For more details circle NED-85 K7 on enclosed inquiry slip

YOURS FOR THE ASKING...

this NEW illustrated guide to safety equipment

Just published . . . an easy-to-use catalog of tested safety equipment for all industries.

Items are grouped according to function . . . you can compare and select quickly and with complete confidence.

Profusely illustrated, Catalog 10 gives you detailed, informative descriptions of more than 300 guaranteed safety products.

SEND FOR YOUR FREE COPY OF CATALOG 10 TODAY

GENERAL SCIENTIFIC EQUIPMENT CO.

7516 LIMEKILN PIKE, PHILADELPHIA 50, PA.

For more details circle NED-86 K7 on enclosed inquiry slip

announcing 8 new HUSKIES..

DE-STA-CO

designed for such rugged chores as body-bucks! . . .

and featuring . . . uniquely-designed forged alloy steel base . . . replaceable components . . . hardened bushings and pivot rods and 3/4" square cold-drawn bars and handles HOLDING PRESSURE 1650 lbs!

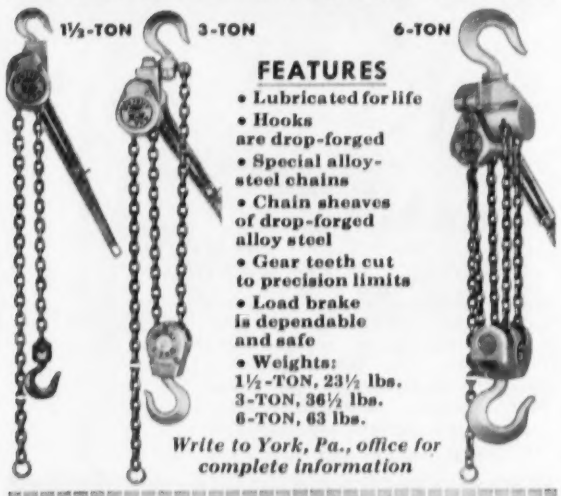
Available in two series . . .
527 (with low-silhouette handle and holding bar) . . .
528 (with verticle handle and horizontal bar, when closed) . . .
Each Series has four different mounting bases.

Send . . . for 527-528 Bulletin for full information!

DETROIT STAMPING COMPANY
WORLD'S FIRST LINE OF TOGGLE CLAMPS
360 Midland Avenue • Detroit 3, Michigan

For more details circle NED-87 K7 on enclosed inquiry slip

NEW WRIGHT Type "C" Pull-A-Ways
THREE SIZES—1½, 3 and 6-Tons



FEATURES
• Lubricated for life
• Hooks are drop-forged
• Special alloy-steel chains
• Chain sheaves of drop-forged alloy steel
• Gear teeth cut to precision limits
• Load brake is dependable and safe
• Weights: 1½-TON, 23½ lbs. 3-TON, 36½ lbs. 6-TON, 63 lbs.

Write to York, Pa., office for complete information

Wright Hoist Division
AMERICAN CHAIN & CABLE
ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

For more details circle NED-88 K7 on enclosed inquiry slip

PRODUC-TROL Visual Control
not only schedules,
But automatically checks with TIME, LINE and COLOR control

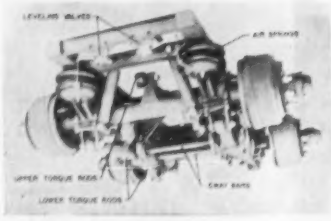
• Original cost and upkeep low.
• Schedules and time checks operations.
• Historical record to back it up.
• Bad situations show automatically.
• Its simplicity has put it into world-wide use.
• Analyze 100 items in 10 seconds.

Effective Tools for Effective Management
WASSELL ORGANIZATION, INC. Westport, Conn.

Phone CA7-4111 or write for Free PRODUC-TROL Booklet NED
NAME ..... COMPANY .....
ADDRESS .....
CITY ..... STATE .....

For more details circle NED-89 K7 on enclosed inquiry slip

AIR SUSPENSION SYSTEM in single and tandem axle models and 18,000 to 36,000-lb capacities

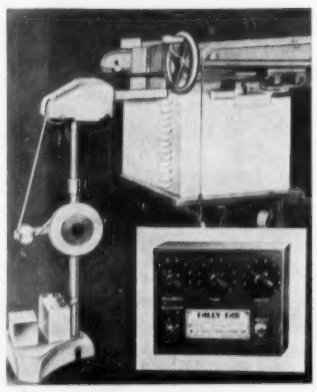


Integrated air reservoirs and advanced sway control are featured in this air suspension system for semitrailers. Single axle models in 18,000 and 20,000-lb capacities and tandem models in 32,000 and 36,000-lb capacities are offered. Packaged assemblies include frame, air springs, reservoirs, shock absorbers, filters, leveling valves, and sway bars. Parts are interchangeable on all models.

Air is delivered to each reservoir by common line from tractor's compressor. Each reservoir in turn serves one side of the air suspension independently of the other. Thus, trailer bed remains level both laterally and vertically under all load conditions. Sway bars minimize lateral roll. Two lower torque arms and an upper torque rod maintain and position the axles laterally and absorb brake torque. Made by **Clark Equipment Co.**, Automotive Div., Buchanan, Mich.

For more details circle NED-90 K7 on enclosed inquiry slip

AUTOMATIC COUNTER & TABBER any preselected count from 1 to 1000 made at 350 per minute



Hand counting is completely eliminated by this Tally-Tab 1000 automatic counter and tabber which adapts to any machine, process, or system. Unit accomplishes accurate, positive counting and tabbing for banding, strapping, inserting, boxing, and similar operations. It features a new predetermined counter on which any count from 1 to 1000 can be preselected. Counting speeds up to 350 per minute are possible. Recycling is automatic when predetermined count is reached.

Unit can be actuated from Micro Switch, photoswitch, pressure switch or any single-pole single-throw switch unit. It consists of completely wired base assembly which occupies 13 x 13-in. area, counter, splashproof Micro Switch, make-up switch which permits subtraction of rejected pieces, inserter head assembly with cover, and sufficient wiring for installation. Units are supplied for 115 v or 230 v ac. Made by **Miller Lauffer Printing Equipment Corp.**, 280 Lafayette St., New York 12, N. Y.

For more details circle NED-91 K7 on enclosed inquiry slip

Speeds Soldering

Self-Cleaning • Non-Acid • No Running

Just a few strokes of the stik does the trick. There's no mess . . . no waste. Powerful fluxing action goes right through oily and rusty surfaces. No tedious cleaning or wire-brushing . . . assures a perfect union of solder and metal. Safe to use . . . will not pit or corrode metal. For all Soft Solders.

Ask your supplier for LA-CO FLUX-Stik . . . or write us for sample.

Also in paste and liquid form. Other LA-CO Fluxes for all specialized needs. Write our Engineering Dept. for free help on your flux problems.

LA-CO BRAND
LAKE CHEMICAL CO.
3053 W. Carroll Ave., Chicago 12, Ill.

For more details circle NED-92 K7 on enclosed inquiry slip

FOR AIR-DUST OR FUME CONTROL...

Get this FREE catalog

WRITE TODAY FOR CATALOG #70
SHOWING NEW INDUSTRIAL APPLICATIONS

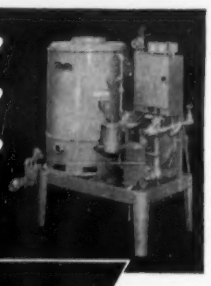
FLEXAUST hose and PORTOVENT retractable ducts are made of strong durable neoprene coated nylon or cotton fabrics, wire reinforced for suction or pressure uses. Sizes 1¼" to 36" i.d.

INSTALLED IN MINUTES . . .
IN SERVICE FOR YEARS

THE FLEXAUST COMPANY
DEPT, NED-8 100 PARK AVE., NEW YORK 17, N. Y.
DISTRIBUTORS IN ALL PRINCIPAL CITIES

For more details circle NED-93 K7 on enclosed inquiry slip

NEED MORE steam?
NEED MORE space?
NEED MORE production?



Clayton STEAM GENERATOR
UP TO 4 TIMES H.P. IN SAME SPACE

★ INSTALL ANYWHERE...
★ ELIMINATE NEED FOR BIG BOILER ROOM OR LONG MAINS!

If you need more steam . . . more production space . . . PLUS fuel savings up to 50% — then you owe it to yourself to investigate the Clayton Steam Generator! Compact (up to 4 times H.P. per square foot of floor space) . . . lightweight, install on any floor, on roof, in basement—yes, even in closets and "waste" space!

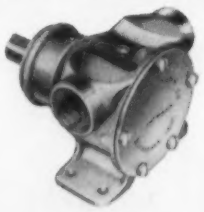
Exclusive! ONLY CLAYTON GIVES THIS *5-Year Published Warranty.* Of every 100 Clayton generators produced (in the last 26 years), 97 are still serving users profitably and efficiently. Compare Clayton's 5-year published warranty on material and labor.

SEND FOR COMPLETE INFORMATION

Clayton MANUFACTURING COMPANY
Box 550 El Monte, California • Cincinnati, Ohio

For more details circle NED-94 K7 on enclosed inquiry slip

cut pumping costs with JABSCO INDUSTRIAL PUMPS



Model 823
Bronze Construction—
1¼" Port Size—Sealed
Ball Bearings

◀ INSTANTLY SELF-PRIMING
◀ SIMPLE, COMPACT, ONLY ONE MOVING PART
◀ DURABLE NEOPRENE IMPELLER
◀ SELF-LUBRICATED
◀ TROUBLE-FREE OPERATION

JABSCO PUMPS

HERE'S another Jabsco industrial pump — designed and built for chemical, pharmaceutical and other industrial applications. Ideal for transfer of various liquids and acids — sump drainage, coolant pumping, general transfer, pulp in solution, filtering, brines, plating solutions — even fluids containing foreign matter or particles, silt, crystals, and other gritty materials. Bronze, stainless steel or plastic construction is available to *solve your specific* pumping problems.
Pumps either light or heavy viscous liquids. Temperature ranges from 35° to 180° F. Write for a Jabsco factory recommendation for your own needs. Specify application, fluid pumped, temperature, pressure, etc.

PATENTED AND PATENTS PENDING

FREE — send for catalog sheets, detailed information... no obligation, of course!

JABSCO PUMP COMPANY
2031 Lincoln Street, Burbank, California

For more details circle NED-95 K7 on enclosed inquiry slip

Lektromesh

The UNIQUE SOLID-METAL SCREEN

Distinguished for its . . .

- **STABILITY in Use**
- **UNIFORMITY of Hole Size**
- **WORKABILITY in Manufacturing Processes**
- **DIVERSITY of Applications to Research and Production**

Electro-deposited in pure copper, pure nickel, or nickle-on-copper. Most popular specification, nickel-on-copper can be furnished in lengths up to 100 ft. and widths up to 36" in the following counts — 25, 40, 65, 80 and 100. Nickel-on-copper, as well as pure copper and pure nickel can be furnished in counts ranging from 25 up to 400, but in relatively small size pieces. Write for details. Tolerances on hole size and thickness suitable for the most critical use. LEKTROMESH is ideal for precise filtration, for fabricated products such as fuel filters and electronic shields. For full details let us send our Bulletin on LEKTROMESH. Address Department 11

SERVING INDUSTRY FOR 76 YEARS

THE C.O. JELLIFF MANUFACTURING CORP.
DIPPING BASKETS • WIRE MESH PARTS
• LEKTROMESH • WIRE CLOTH
RESISTANCE WIRE • STRAINERS • FILTERS
SOUTHPORT • CONNECTICUT

For more details circle NED-96 K7 on enclosed inquiry slip

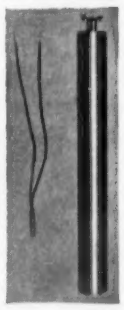
ON THE SPOT HEAT
to your exacting requirements!

TRENT STRIP HEATERS

for Ovens, Dryers, Kettles, Process Equipment

- Flat Metallic Tube Casing
- Ceramic Block Terminal Blocks
- No Grooves—No Heat Distortion
- Sealed End Construction

Available in a complete range of types and sizes, wattage requirements, and voltage conditions—for maximum safe surface temperatures of 750°F. and 1000°F!



TRENT CARTRIDGE HEATERS

for Dies, Molds, Platens, Sealers, Defrosting

- Brass or Steel Sheath Construction
- Silver Soldered End Opposite Terminals
- Moisture and Wax Resistant
- Nickel Chromium Heater Coil Sealed in Ceramic Insulation
- Brass Angle, Pigtail, Rod, or Stud Type Terminals

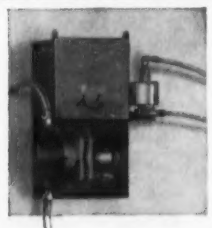
Standard sizes from ⅛" to 1¾" diameter, and 1½" to 22" in length, are supplied in a range of wattage requirements for 110 and 220 volt operation.

Discuss your spot heating requirements with a Trent representative.

Trent Representatives in Principal Cities Coast to Coast

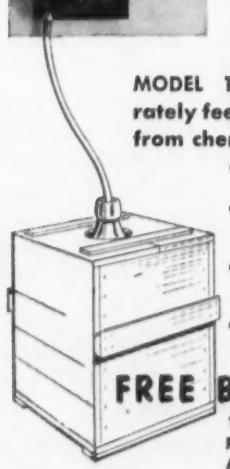
TRENT INC.
Electrically Heated Industrial Equipment
242 LEVERINGTON AVE., PHILA. 27, PA.
In Canada Supreme Power Supplies Limited Toronto 14

For more details circle NED-97 K7 on enclosed inquiry slip



NEW! SAFE!

DIRECT FEEDING FOR LOW COST CIRCULATING WATER CONDITIONING



MODEL 19130 PROPORTIONEER accurately feeds concentrated acids directly from chemical carboys . . .

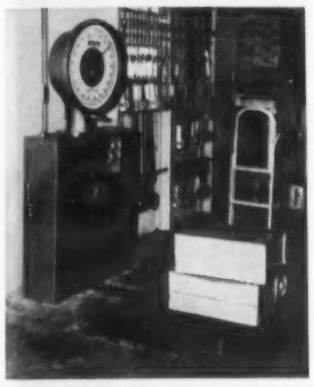
- Complete package includes foot valve which slips into mouth of small carboy.
- Eliminates excessive handling of corrosive chemicals such as nitric, chromic and sulphuric acid.
- Pumping rates are adjustable from 0.8 to 8.0 gallons per 24 hours to meet system's requirements.
- Choice of pneumatic or hydraulic operation.

FREE BULLETIN . . . Request Bulletin 1913 for complete data. Write to PROPORTIONEERS, INC., 425 Harris Ave., Providence 1, R. I.

PROPORTIONEERS
DIVISION OF
B-I-F INDUSTRIES
METERS FEEDERS CONTROLS

For more details circle NED-98 K7 on enclosed inquiry slip

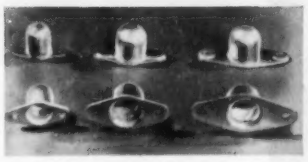
TRACK & PLATFORM SCALE
gross capacities up to 12,000 lb



Materials handled from a track type conveyer and those on trucks and pallets can be weighed by the Detecto combination track and dormant platform scale. It has a single dial. Scale is built to order only to serve certain types of operations. Gross weighing capacities may reach 12,000 lb. Should the need arise, the maximum capacity with small increments of weight is available through use of drop weights in unit weight cabinets. Made by **Detecto Scales Inc.**, Dept. NED, 540 Park Ave., Brooklyn 5, N. Y.

For more details circle NED-99 K7 on enclosed inquiry slip

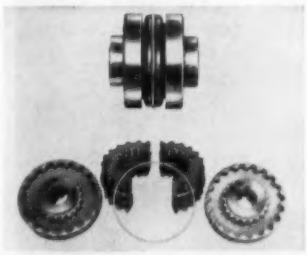
FASTENER RECEPTACLES
seal equipment working parts



Leakage of air, water, and dust is prevented from reaching working parts of equipment by a series of sealed, rigid fastener receptacles. Sealed assembly is cadmium plated. Used with existing sealed stud assemblies, receptacles take pressure up to 90 psi. They have rivet spacings of ¾, 1, and 1⅜ in. Sealing compound is used between receptacle and mounting surface before riveting. Made by **Camloc Fastener Corp.**, Dept. 26, 22 Spring Valley Rd., Paramus, N. J.

For more details circle NED-100 K7 on enclosed inquiry slip

FLEXIBLE COUPLING
six sizes from 3 to 80 hp



All shock vibrations are absorbed by the coupling sleeve of the Sure-Flex flexible coupling. Internal and external teeth of the sleeve mate with the flange hub teeth and lock tight under torque load without clamps or screws. Coupling will tolerate, without wear, internal abuse or high resisting forces; angular misalignment of up to 1 degree; parallel misalignment from 1/32 to 1/16 in., depending on shaft size; and free end-float up to ⅛ in., depending on size. Final coupling assembly is made without tools. Six sizes for motors from 3 to 80 hp are available with shaft bores from ⅝ to 2¼ in. Made by **T. B. Wood's Sons Co.**, Fifth Ave., Chambersburg, Pa.

For more details circle NED-101 K7 on enclosed inquiry slip

New Aerovent
type **LS** belted and direct-driven **4-blade**
industrial fans

Designed for high-volume air movement against resistances ¾" S.P. Featuring new, wider 4-blade "Macheta" Airfoil propellers, "LS" fans are available in ring, duct or square panel types. Standard construction features mean lower initial costs, with more efficient operation. Aerovent "LS" fans are the practical solution to all standard air-moving problems. Special motors, propellers, coatings available for corrosive conditions.

Write for Bulletin 750-A (Belt-Driven) or 775 (Direct-Driven)

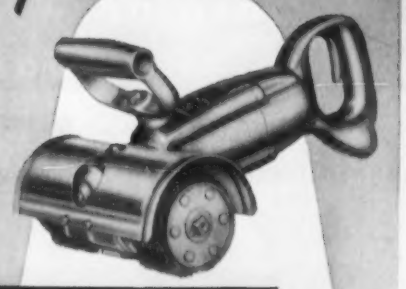
"ls" duct fans

Designed for use in all standard duct systems. More efficient performance at lower speeds, against static pressures to ⅝" S. P. Sizes 24" to 48".

Aerovent FAN CO. INC.
Ash and Blake Sts. Piqua, Ohio

For more details circle NED-102 K7 on enclosed inquiry slip

Chip Away



SCALE RUST PAINT

AURAND CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 14 for complete details

AURAND MFG. & EQUIPMENT CO.
1210 Ellis St., Cincinnati 23, Ohio

For more details circle NED-103 K7 on enclosed inquiry slip

TOP FIRMS SHOW

PROVED SAVINGS
UP TO 75% in Set-up and Grinding Time

VISUAL GRIND

with continuous work inspection and infinite precision

SIMPLIFIED OPERATION

When working with TUNGSTEN CARBIDE, STAINLESS STEEL, STELLITE or TOOL STEELS, VISUAL GRIND permits a semi-skilled operator to grind precision pieces without continued checking with the comparator. Automatic inspection is accomplished with the built in optical comparator.

Write us now . . . let us tell you how VISUAL GRIND will speed production . . . cut costs.

METALS MARKET PLACE OF THE WORLD
CHICAGO METAL SHOW

VISIT US AT BOOTH 860
NATIONAL METALS SHOW
NOVEMBER 4-8, 1957

THE CLEVELAND GRINDING MACH. CO.
1740 Eddy Rd. Cleveland 12, O.

For more details circle NED-104 K7 on enclosed inquiry slip

DEGREASER!
machinery shampoo

SPRAY OR BRUSH ON . . .

Takes cling out of oil and grease . . . emulsifies it . . . so that all dirt may be hosed off. Launders engines, lathes, machinery, faster, more completely than steam cleaning. Self scouring action brings out factory new appearance . . . provides accurate visual inspection. Where work will not withstand the use of water for rinsing, we can recommend suitable GUNK replacement. (GUNK is also an excellent paint brush cleaner.) Shipped in concentrated form . . . 55 gal. drum makes 500 gals. heavy-duty Degreaser! Genuine GUNK is sold in bulk sizes at better industrial wholesalers everywhere!

THE CURRAN CORPORATION
(Home Office) South Canal St. LAWRENCE, MASSACHUSETTS — Plants — GUNK Chicago Company Chicago 38 (licensee)
IMMEDIATE SHIPMENT — 1 PINT OR A TANK CAR

For more details circle **NED-105 K7** on enclosed inquiry slip

OFF-THE-SHELF INSTRUMENTATION

When you need an instrument fast, it pays to take advantage of Fischer & Porter's off-the-shelf instrumentation plan. Stock shelves in Hatboro, Chicago, Houston, and Los Angeles carry an ever increasing selection of quality F & P flowmeters, transmitters, indicators, recorders, controllers, and chlorinators ready for immediate delivery. Complete prices, specifications, and availability data are in Catalog 2, free on request. Write Fischer & Porter Company, 3607 County Line Rd., Hatboro, Pa.

FP FISCHER & PORTER CO.
Complete Process Instrumentation

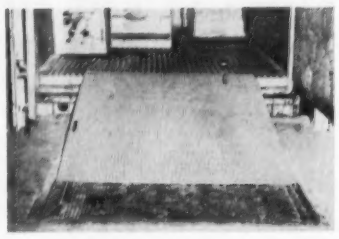
For more details circle **NED-106 K7** on enclosed inquiry slip

SELF-LOCKING BOLTS
have nylon plug in thread section

Line of Nylock self-locking bolts includes diameters from No. 10 to 1 in. They lock whenever wrenching stops, and are vibrationproof, liquid tight, and reusable. Nylon plug in the threaded section wedges opposite mating threads together, and locks bolt whether or not it has been seated. Bolt can be wrenched tight and backed off repeatedly without damage to threads, seating surfaces, or holding power. Made by **Republic Steel Corp.**, Bolt & Chain Div., 1970 Carter Rd., Cleveland 13, Ohio.

For more details circle **NED-108 K7** on enclosed inquiry slip

ADJUSTABLE DOCK PLATE
manually operated, moves four ways



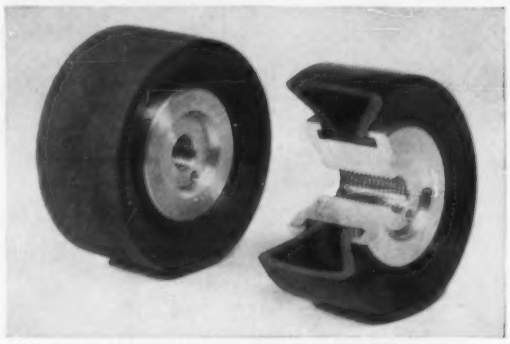
Pit depth of only 17 in. is required to install the Holleen adjustable dock plate in new or existing docks. It is manually operated and has two levers for up and down and in and out movements. Welded steel device is installed flush with dock surface and adjusts up to 16 in. above and up to 10 in. below dock level. Standard model has capacity of 15,000 lb with lip resting on vehicle or in level lock position. Maximum in-and-out movement is 22 in. Dimensions of movable plate are 60 in. wide by 84 in. long. Made by **Bloomer Industries, Inc.**, Dept. N, 623 17th Ave., Bloomer, Wis.

For more details circle **NED-109 K7** on enclosed inquiry slip

SELF-TAPPING INSERT
for use in wood, plywood, laminates

Self-tapping carbon steel insert provides threads that will not strip under stress or hard use in wood, plywood, fiberboard, chipboard, and laminates. After a combination drilling and countersinking operation, the insert is installed with a shoulder type inserting tool used in a brace or breast drill or automatic power tools. Application is to wood furniture, movable partitions, pallets, crates and boxes, cabinets, and patterns. Two sizes are now available, with others to be made available. Made by **Heli-Coil Corp.**, 1476 Shelter Rock Lane, Danbury, Conn.

For more details circle **NED-110 K7** on enclosed inquiry slip



NU-MATIC ANNOUNCES NEW PRINCIPLE IN INFLATED GRINDING WHEELS

The new "Aircore" design consists of only TWO parts . . . the drum and the core. And, it is SELF SEALING . . . as the hollow rubber drum is inflated it automatically makes positive, leak-proof contact with the metal core.

Check these PLUS features:

PRECISION OPERATION. Wheel always runs true because rubber drum seats on accurately machined ledge of core. Vibration-free operation.

FEWER PARTS TO STOCK AND MAINTAIN. No nuts, bolts or sideplates.

TROUBLE-FREE CORE. Made of machined aluminum. Can't break, crack or leak. Will last a lifetime.

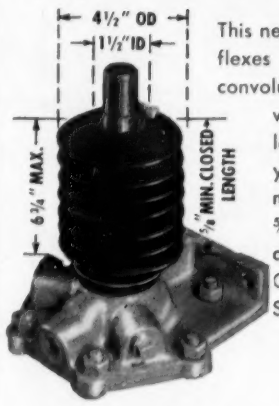
Three models are available: 3" diameter x 2" width, 4" diameter x 2" width, 5" diameter x 3½" width.

WRITE FOR COMPLETE SPECIFICATIONS. Also, ask about Nu-Matic's new "Flexcore" . . . an expanding-type grinding wheel with replaceable rubber segments.

NU-MATIC GRINDERS, INC.
8224 Carnegie Ave. Cleveland 3, Ohio

For more details circle **NED-112 K7** on enclosed inquiry slip

PROTECTED by GORTITE



This new, pliable protective sleeve flexes normally on double-thick convolutions to over-come the weaknesses of molded and leather parts. 1 or 1000 to your specifications without mold charge. Notice the ⅝" close-down on this hydraulic cylinder. A&A Mfg. Company Inc. 712 S. 12th St., Milwaukee 4, Wis.

ALL SHAPES AND CONTOURS

Sleeves . . . Boots . . . Bellows . . . Way-protectors . . .

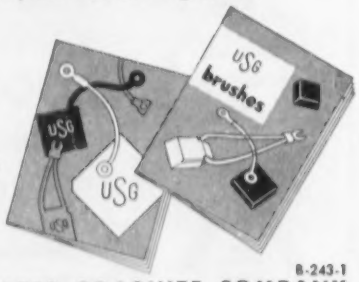
For more details circle **NED-113 K7** on enclosed inquiry slip

USG®

BRUSHES

The solution to many major or minor brush problems can be solved with United States Graphite Company's USG Brushes. The shunt connections are permanent. Sizes are accurate for each application from fractional horsepower to locomotive diesel generator. Grades include carbon, carbon-graphite, electrographilitic, graphite, metal-graphite and silver graphite.

There is helpful, useful data in the complete but CONCISE USG Brush catalog B-56 and the USG grade list. Write for your copies today.



B-243-1

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

For more details circle **NED-107 K7** on enclosed inquiry slip

Protect personnel during welding operations

IPCO WELDING CURTAINS

Confines the welding operation to a given area; protects other workers and passers-by from harmful rays, flying chips and scale. Made of flameproofed canvas (Underwriter's Approved Treatment) or asbestos, complete with eyelets for suspending on rod or pipe support.

Write for Bulletin No. 43

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle **NED-111 K7** on enclosed inquiry slip

PRAB PRECISION STEEL BELT CONVEYOR

PATENT PENDING

To carry work to or carry scrap or turnings from presses, lathes, machines, furnaces, shears.

Totally enclosed construction. Liquid-tight if required. 2½" pitch belt made of stampings (tolerance ±.005) assembled on ½" steel rods. Widths 6" to 48". Side wings eliminate material interference with drive sprockets.

Hardened wheels with Bost-Bronze bushings.
Layout to suit your requirements.

Send for Catalog No. 500

Over one hundred units now operating successfully in major industrial plants.

Representatives in Principal Cities

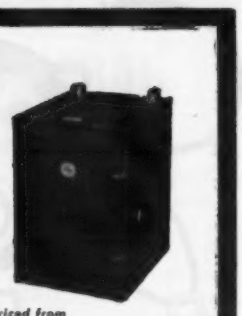
PRAB CONVEYORS, INC.
30119 GROESBECK HIGHWAY
ROSEVILLE • (Detroit) • MICH.

For more details circle **NED-114 K7** on enclosed inquiry slip

how to trap dust

that damages your machines and hurts company morale

Easy-to-move **TORIT** dust collectors trap dust at its source!



Priced from $190.00

Untrapped dust costs money: "secretly" forces precision machines out of line, limits production. Torit dust collectors are unitized for custom installation—save more money, usually more efficient than central (built-into-building) system. Torit unit operates only when machine or combination of machines it protects are on. Filtered air may be returned to room to save heat. Many models and sizes, all self-contained, easy to move. Write today to . . .

TORIT *manufacturing co.*

Dept. 201 311 Walnut Street, St. Paul 2, Minn.

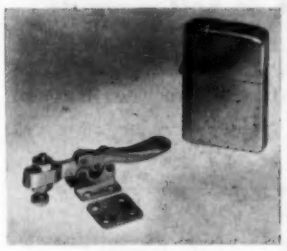
For more details circle NED-115 K7 on enclosed inquiry slip

CAR WASHER
shipped ready for installation

Minimum of electrical work and plumbing is required to place this all-purpose car washer in operation. It is shipped assembled and ready for installation. Water pressure as low as 16 lb is sufficient for its spray pattern. Spray equipment moves around the car automatically, making a complete circuit in 1½, 2½, or 3½ minutes, according to setting. Spray is controlled so that it does not impede work as it washes away dirt and rinses. Complete wash cycle consists of three trips of spray equipment around the vehicle. Unit can be installed indoors or outdoors, and is 50 in. wide by 196 in. long. Made by **Wohlert Corp.**, Dept. NED, 708 E. Grand River, Lansing 5, Mich.

For more details circle NED-118 K7 on enclosed inquiry slip

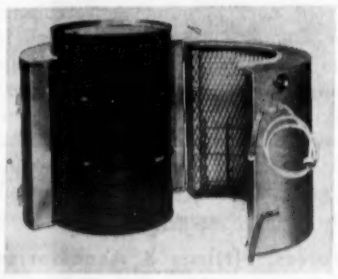
TOGGLE CLAMP
only ¾-in. high by 2¾ in. long



Shown alongside a cigarette lighter, this Tiny Toggle clamp is only ¾-in. high and 2¾-in. long when closed. The model 105-U unit has a holding pressure up to 42 lb. It is suited for various applications, including holding small assemblies during multiple wiring, soldering, and similar operations. Made by **Detroit Stamping Co.**, 360 Midland Ave., Detroit 3, Mich.

For more details circle NED-119 K7 on enclosed inquiry slip

AUTOMATIC DRUM WARMER
now available in 14 and 16-gal sizes



Four sizes of Palmer Drum Warmers are now available with the addition of two sizes for 100 and 120-lb grease drums to the previously available 30 and 55-gallon sizes. New models are rated 1500 w and operate on 115 v. Automatic temperature controls have ranges of 100 to 450° F and 60 to 250° F. Hinged halves fit easily around drum, and flexible gasket assures snug fit. Made by **Harold L. Palmer Co.**, Dept. 48A, 2980 W. Davison Ave., Detroit 38, Mich.

For more details circle NED-120 K7 on enclosed inquiry slip

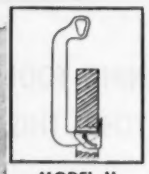
One-Motion Reel Loading Cuts Time and Costs!

DIXON One-Man COIL GRAB

MODEL A COIL GRAB
Wedge separates coils easily. Lifts and turns in one motion.

The Dixon Coil Grab saves labor and speeds coil handling by enabling one man to lift, turn and load coil on the stock reel with a single, easy motion. Forged steel wedge speeds separation of stacked coils. Positive grip and support eliminate coil damage, assure operator safety. Standard models available from stock. Capacities from 1,000 to 5,000 and 10,000 to 15,000 lbs., for coil widths ¼" to 48".

ALL MODELS AVAILABLE FROM STOCK



MODEL H COIL HOOK
Pivoting shoe supports, turns, and locks coil in position in one motion.

FREE BULLETIN
Illustrates standard models and shows how to handle all coil sizes safely, rapidly, without damage. Write for it today.

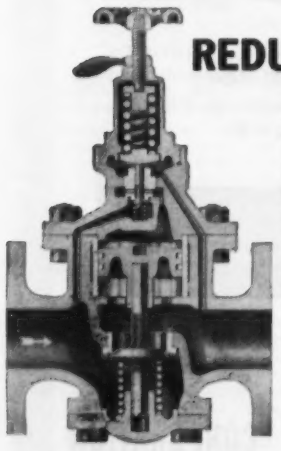
DIXON

DIXON AUTOMATIC TOOL, INC.
2302 — 23rd Avenue
ROCKFORD, ILLINOIS

AUTOMATIC PARTS HANDLING AND ASSEMBLY EQUIPMENT

For more details circle NED-116 K7 on enclosed inquiry slip

STANDARDIZE
on a complete line of PRESSURE REGULATORS and REDUCING VALVES



Class L-3 Pressure Reducing Valve

Leslie Co's recently revised Bulletin 5302-A shows a wide line of valves for pressure reduction, overflow and differential pressure regulation. Maximum interchangeability of parts and long service life make standardizing on Leslie well worth investigating. Send for the bulletin today. Over 25 lines in a full range of sizes.

TRADE LESLIE MARK

615

LESLIE CO., 227 Grant Avenue, Lyndhurst, New Jersey.

For more details circle NED-117 K7 on enclosed inquiry slip

Now you can bury your pumping problems

Fairbanks-Morse Water-Lubricated Submersible Pump

All the advantages of a submersible pump, plus time- and performance-tested Fairbanks-Morse features. Permits well location anywhere a well can be drilled. No costly pump house, no line shafts, no packing boxes or lubrication devices. Reduces maintenance to minimum. Installation is fast, economical. F-M motor has lifetime Copperspun rotor cooled and lubricated by water; gives full motor output. Practically soundless.

These pumps cover wide range of volume, pressure, and setting depth requirements. Ask your F-M Sales Engineer for Bulletin 6910, or write Fairbanks, Morse & Co., Dept. NED-10, 600 So. Michigan Ave., Chicago 5, Illinois.

FAIRBANKS-MORSE
a name worth remembering when you want the BEST

PUMPS • SCALES • DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • RAIL CARS • HOME WATER SERVICE EQUIPMENT • MAGNETOS

For more details circle NED-121 K7 on enclosed inquiry slip

8548

DIEMAKERS! this DIE-PART PORTELVATOR®

(OR AN ENGINEERED VARIANT)
will speed your work and ease your "handling."

Top plate raises and lowers for fitting operations and rotates 360° to give easy access to die.

Write for our FREE Bulletin No. 2548. It gives full details.

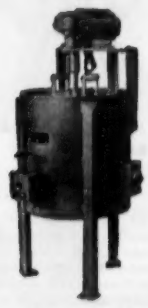
THE HAMILTON TOOL COMPANY • 901 HANOVER STREET
HAMILTON • OHIO • U. S. A.

For more details circle NED-122 K7 on enclosed inquiry slip

Sta-Warm
Compound Melting
ENGINEERING SERVICE

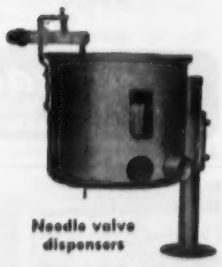
. . . fits these Basic Styles of Sta-Warm compound melters into your Production.

Large and small rectangular dipping tanks

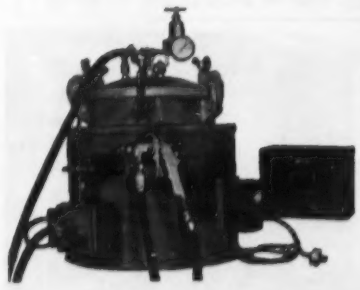


Large, round compound melters

Smaller capacity bench pots



Needle valve dispensers



Pressure tank assemblies

IF YOU have a compound melting problem, the one place to go is Sta-Warm. Offering a wide variety of standard and specially designed models of compound heating, melting, conveying and dispensing equipment is only *part* of what you'll find at Sta-Warm. Engineering this varied equipment into your production requirements is a Sta-Warm service that helps you get the most from your investment. It pays off. If you want to up-grade your compound melting set-up, why not start by inquiring for Sta-Warm catalogs . . . *today?*

STA-WARM ELECTRIC CO., 130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of Abrasive & Metal Products Co.

Sta-Warm
ENGINEERED EQUIPMENT for melting and dispensing heated compounds

For more details circle NED-123 K7 on enclosed inquiry slip

Other FLEX-A-PRENE "Firsts"

- Lint free — no wicking action.
- All parts non-toxic — non-allergic.
- Self-adjusting — snug-fitting.
- Simply designed for easier filter removal.
- Inside of frames serrated for airtight locking.
- Weighs only 1 ounce.
- Designed for use with goggles or spectacles.
- Only 4 tough long-wearing, interlocking parts.
- Non-irritating plastic frames — unbreakable in normal usage.
- Prenex filter outlasts all throw-away types. Savings pay the cost of a complete mask.

FLEXO Products, Inc. Westlake, Ohio

For more details circle NED-124 K7 on enclosed inquiry slip

Commander

SELECT A SPINDLE

DUAL SPEED DRILL PRESS TURRET

DRILLS, REAMS, TAPS ON 1 DRILL PRESS SPINDLE!

- **Fits Any Drill Press**
- **Increases Production**
- **Reduces machine, fixture costs**

Commander Select-A-Spindle permits you to do 3 operations on a single drill press spindle . . . save time . . . eliminate multiple handling of piece parts, speed production and reduce overall costs. Dual Speed Select-A-Spindle permits selection of proper speed for each operation. Quick, positive hand indexing positions each tool accurately for sequence operations. Select-A-Spindle is built to tap with any 1, 2 or all 3 spindles to the full capacity of the unit. Adjustable torque control spindles for protection of taps to ¼" available.

Write for illustrated circular on Select-A-Spindle, other Commander Production Tools and name of your nearby Commander Distributor

Commander MFG. CO.
4220 W. KINZIE STREET, CHICAGO
PRODUCT OF COMMANDER . . . BUILDER OF PRODUCTION TOOLS

For more details circle NED-125 K7 on enclosed inquiry slip

No muss, no fuss, with this easy-to-use

REPUBLIC TOOL ROOM

A systematic storage arrangement using Republic tool room and shop equipment will save money, time, labor, floor space and headaches. Made at Republic's Berger Division, every item of durable Berger steel construction does an efficient job . . . provides easy access to tools, parts and other inventory. Included are Wedge-Lock, Convertible or Flexi-Bilt Shelving, Wedge-Lock Long Parts Storage Units, work benches, bar racks, special-purpose tool inserts and many other items. Call your nearest Berger representative or send for catalog describing Republic's big line.

REPUBLIC STEEL
BERGER DIVISION
1096 Belden Avenue • Canton 5, Ohio

For more details circle NED-126 K7 on enclosed inquiry slip

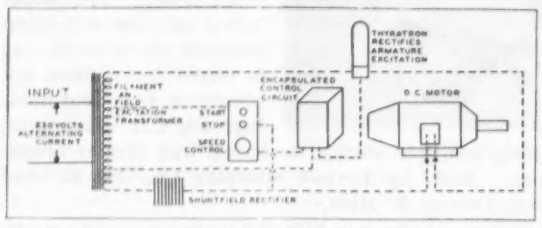
JACKING MECHANISM for pushing, pulling, or actuation

Usable in any position and adaptable for incorporation in machines and equipment, line of worm gear screw jacks can be used for precision positioning, pushing, pulling, or linear actuation. Applications include such uses as machine adjustment, roll elevating, controlling loading platforms and feed tables, raising and lowering equipment or machine elements, and stabilizing and leveling mobile equipment. Illustrated model has a 15-ton capacity, gear ratio of 8-to-1 with 32 revolutions giving 1-in. travel, and travel to suit application. Power can be manual or motorized speed reducer. Four-way miter box assemblies are available for systems requiring synchronized movement. Made by **Joyce-Cridland Co.**, 2222 E. First St., Dayton 3, Ohio.

For more details circle NED-127 K7 on enclosed inquiry slip

MOTOR SPEED CONTROL converts 230 v ac to half-wave dc

Change-over of a machine from alternating current constant speed motor drive to infinite speed range of direct motor drive is simple with the Revotrol



converter. Unit converts 230 v ac to half-wave direct current and automatically provides the right amount of torque up to 100 per cent, as required by load. This torque supply is available at all speeds from normal nameplate reading to practically zero or standstill speed. Features include preset speed, no zero speed adjustment, line voltage adjusting taps, single tube circuit, encapsulated control components, dynamic braking, and protection from thermal overload and field voltage loss. Units are available for 1/6, ¼, ⅓, ½, and ¾ hp. Made by **Acme Electric Corp.**, 30 Water St., Cuba, N. Y.

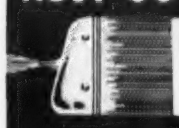
For more details circle NED-128 K7 on enclosed inquiry slip

Valves, Fittings & Accessories

Kerotest Mfg. Co.—Refrigeration and air conditioning valves, fittings and accessories are described in illustrated 8-page condensed catalog KB-457. Sizes and prices of each unit are given. Service kits are included.

For more details circle NED-129 K7 on enclosed inquiry slip

RUST-GO Coatings



STOP RUST

and keep it stopped!

Now! A Complete Rust Fighting System for Metal

RUST-GO PRIMER

Bonds tightly to sound rusted metal or new surfaces. Neutralizes rust-forming conditions by displacing all moisture and air. Contains five rust-fighting ingredients—fish oil, tung oil, zinc chromate, red oxide, and tough phenolic resins. Penetrates pores of metal to keep rust stopped. Gives perfect adhesion to RUST-GO Finish Coat.

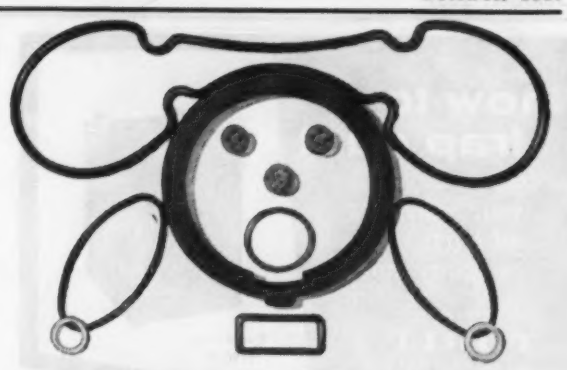
RUST-GO FINISH COAT

Tough, phenolic-reinforced glossy film resists corrosive industrial fumes, moisture, abrasion, and weather. Flexes with structural movement—gives with expansion and contraction—will not crack or chip. Heavy-Duty, fade-resistant pigments in red, gray, green, or black. Together, RUST-GO Primer and RUST-GO Finish Coat make an unbeatable team against rust!

Write Dept. D-10 for folder

THE GARLAND COMPANY
Cleveland 5, Ohio

For more details circle NED-130 K7 on enclosed inquiry slip



ROTH molds SILICONE PARTS and SPONGE

If you need parts that require an extreme temperature range, −100°F to +500°F, a high resistance to compression set and an exceptional resistance to oxidation, then Silicone is the answer. Let Roth's 34 years of experience help you solve your problems.

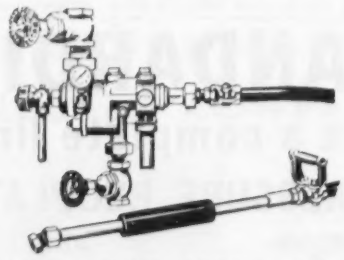
Send for specifications
ROTH RUBBER COMPANY
1860 South 54th Avenue • Chicago 50, Illinois

For more details circle NED-131 K7 on enclosed inquiry slip

NO OTHER CLEANING TOOL . . . *EVER* MATCHED THIS

Nothing softens, loosens and moves dirt like a SELLERS Hydraulic Jet Cleaner . . . and there are installations in over 4000 plants that prove it.

The SELLERS Hydraulic Jet Cleaner needs only a supply of cold water and steam as low as 5 psi. It



produces a hot liquid jet providing scrubbing-action at the point of impact with pressures to 200 psi., temperatures to 210°F.

Use it on floors, conveyors or machinery—it sweeps hydraulically . . . penetrates the smallest crevices, reaches and cleans without disassembly.

GET THE FACTS . . . *send for Bulletin 424.*

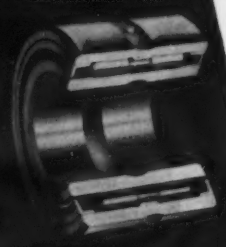
SELLERS *Injector* CORPORATION

1605 Hamilton Street, Philadelphia 30, Pa. • Since 1848

For more details circle NED-132 K7 on enclosed inquiry slip

McGILL®

greater capacity



plus positive protection!

sealed

GUIDEROL® NEEDLE BEARINGS

An effective combination of full complement capacity, guided rollers and effective sealing is provided inexpensively with the SG series of sealed GUIDEROL bearings. Lip-seals are built into standard GUIDEROL bearings without increasing bearing width — interchangeable with ordinary needle bearings.

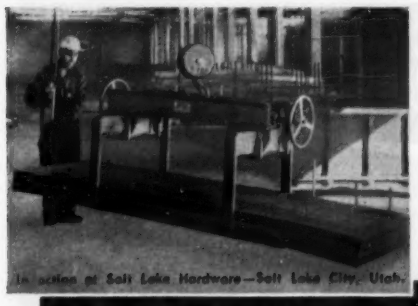
To seal lubricant in or keep dirt out, you will find the answer in one of five seal combinations possible with GUIDEROL SG series bearings.

Write for helpful bearing Handbook No. H-54-B

McGILL® *precision needle bearings*

McGILL MANUFACTURING CO., INC.
101 N. LAFAYETTE ST. VALPARAISO, INDIANA

▲ For more details circle NED-133 K7 on enclosed inquiry slip ▲



In action at Salt Lake Hardware—Salt Lake City, Utah.

DOWNS SAFETY SHEET LIFTER

Speeds Handling • Cuts Costs!

Fast, easy width adjustment—Straightline horizontal action. Low headroom design stacks sheet steel higher and closer to ceiling. Requires only minimum side clearance . . . permits closer stacking—gets more material in smaller area. No other method handles loose or bundled sheet steel as efficiently as Downs Safety Sheet Lifters.

One man operation is a time and money saver . . . reduces handling costs . . . reduces sheet damage and is safe.

A variety of sizes and capacities available—widths up to 72"—from 2 to 10 tons . . . manually or power operated. Many optional arrangements available to meet your specific requirements.

Write for Bulletin 202-6 for specifications and complete information.

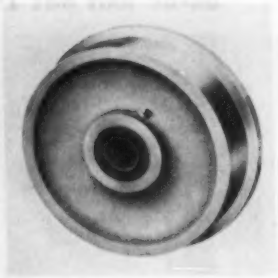
DOWNS

DOWNS CRANE & HOIST CO.
MECHANICAL ENGINEERS
540 W. VERNON AVENUE
LOS ANGELES 37, CALIF.

Electric Cranes • Hand Cranes • Jib Cranes • Sheaves • Sheave Blocks • Plate Grips • Plate Hooks • Crane Trolley Hoists • Crane Wheels • Crane End Truck Units • Jib Crane Fittings • Automatic Mechanical Load Brake Crane Hook Blocks

▲ For more details circle NED-134 K7 on enclosed inquiry slip ▲

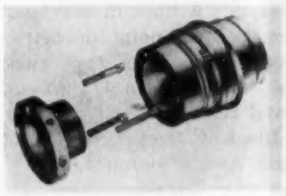
FLANGED TRACK WHEELS
single and double flanged types



Semisteel and annealed ductile cast iron flanged wheels for industrial track car use are available in 5 to 15-in. sizes. Single and double flanged types can have plain bearings or Timken tapered or Hyatt bearings and pressure lubrication fittings. Load capacities range from 500 to 6000 lb. Swivel and rigid casters are offered for mounting the wheels. V-grooved wheels for use on inverted angle iron tracks are also available. Made by **Hamilton Caster & Mfg. Co.,** 1668 Dixie Highway, Hamilton, Ohio.

▲ For more details circle NED-136 K7 on enclosed inquiry slip ▲

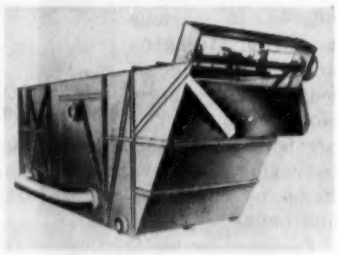
FLEXIBLE COUPLINGS
six sizes rated from 22 to 150 hp



Line of flexible couplings, taper-bored for use with QD Taper bushings, includes six different sizes which are rated from 22 to 150 hp at 1750 rpm. Stock bushing bore sizes begin at ½ in. and progress by 16ths to 3½ in. Use of taper bushings reduces normal stock requirements of coupling bodies, makes a wide range of shaft sizes immediately available, and affords easy fastening to the shaft. Made by **Lovejoy Flexible Coupling Co.,** 4891 W. Lake St., Chicago 44, Ill.

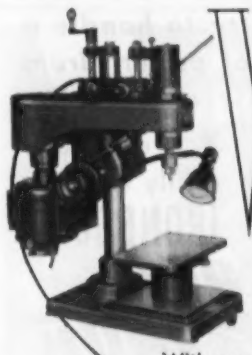
▲ For more details circle NED-137 K7 on enclosed inquiry slip ▲

VACUUM FILTER
capacity increased to 1000 gpm



Water flow capacity of the Delpark Filter - Matic tubular screen vacuum filter has been increased to 1000 gpm. Unit is designed for filtration of grinding coolants and cutting oils, and employs tubular screen elements manifolded into a suction header box in which 18-in. Hg vacuum is maintained. Automatic reversal of coolant flow knocks filtered deposits from screens. Sediment is removed by chain-driven flights to a disposal tote box. Flow of coolant to or from filter is not interrupted during cleaning cycle. Filter aids can be used for precoating the screens when absolute filtration is required. An automatic precoat feeder is optional. Made by **Industrial Filtration Co.,** Dept. FMH-203, Lebanon, Ind.

▲ For more details circle NED-138 K7 on enclosed inquiry slip ▲



Varimatic®

THE SUPER SENSITIVE, SMALL-HOLE, PRECISION DRILLING MACHINE

"for the finest work you do"

With capacity of .004" to ¾" in all drillable materials, and spindle speeds from 840 to 9300 R.P.M. infinitely variable in two speed ranges . . . *this* is the machine which the precision industries rely upon to handle the "heart-break jobs."

You will want FULL INFORMATION and we will be glad to furnish it.

Ask for our FREE BULLETIN NO. 2489

ADDRESS
THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

2489

▲ For more details circle NED-139 K7 on enclosed inquiry slip ▲

Solution to Toughest Industrial Braking:

GOODYEAR aircraft-type DISC BRAKES — now custom-designed for difficult industrial braking applications where torque, energy, and space are major problems

Faced with difficult braking problems where conventional "off-the-shelf" brakes simply cannot do the job economically, *if at all?*

Get the complete facts on this braking principle developed by Goodyear to control the largest and fastest aircraft in the world—now being custom-designed to cope with a host of industrial braking problems which heretofore had engineers stymied. The results are down-right spectacular!

Project Engineers or Chief Engineers: Write for a complete on-the-job analysis of how the Goodyear aircraft-type Disc Brake may change the whole performance picture of your project. By return mail you will also get FREE BROCHURE which includes technical data and interesting case histories of this new braking principle's industrial successes. Address: Goodyear, Aviation Products Division, Dept. J-1729, Akron 16, Ohio.

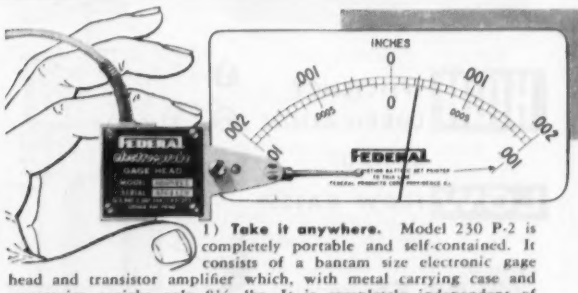
LOOK WHAT IT CAN DO!

Smooth Action—non-self-energizing, it produces equal torque in either direction proportional to the force applied. **Faster Cooling**—has higher kinetic energy absorption capacity than any other industrial brake of comparable size. **Flexibility**—design principle permits almost any combination of torque and energy capacities. **Versatility**—can be operated hydraulically, mechanically, pneumatically or can be spring-set, solenoid-released. **Automatic Adjusting**—hydraulic- and air-actuated units have automatic compensation for lining wear. **Economical**—saves on equipment "down time" due to quick, easy lining replacement.

Custom-Designed
INDUSTRIAL DISC BRAKES

GOODYEAR AVIATION PRODUCTS

▲ For more details circle NED-140 K7 on enclosed inquiry slip ▲



the electro-probe

NEW, LOWER COST ELECTRONIC GAGING

1) **Take it anywhere.** Model 230 P-2 is completely portable and self-contained. It consists of a bantam size electronic gage head and transistor amplifier which, with metal carrying case and accessories, weighs only 8½ lbs. It is completely independent of external power, and electrical parts are hermetically sealed.

2) **Mount it on any conventional fixture.** No special stand or holding fixture is required because gaging pressure is extremely light (less than 5 grams). Supports which would deflect under even normally light gaging pressures remain rigid when the Electro-Probe is used. And the gaging pressure remains constant throughout range (change is less than 0.1 gram per .001").

3) **Set it up in a jiffy.** Now you have Precision *without* time-consuming, finicky adjustments. Master it anywhere within its range because response is absolutely linear. Full scale Zero Adjustment makes positioning easy and fast. Warm up time is virtually zero. Gage when *you're* ready!

4) **Gage with ease and assurance.** Contact has friction-free travel of .060". Clutch mounting allows head to be placed in almost any position and provides complete over-travel protection. Either of two magnifications instantly available. Wide 4½" dial easy to read.

5) **Enjoy greater reliability than ever before.** Use of *printed circuits* and *transistors* means trouble-free performance. Connections are sure, operating current amazingly low — no heating or voltage regulation problems, no dependence on electrical outlets. Learn more about this truly portable, reliable, accurate and versatile gaging device.

Ask FEDERAL *First*

FOR RECOMMENDATIONS IN MODERN GAGES . . .

DIAL INDICATING, AIR, ELECTRIC, OR ELECTRONIC—FOR INSPECTING, MEASURING, SORTING, OR AUTOMATION GAGING

The new Electro-Probe Model 230 P-2 is far more than just another electronic test indicator.

- **No need for special stands or holding fixtures.**
- **No need for external power.**
- **No voltage fluctuation or warm-up problems.**
- **No need for close gage head positioning during set-up.**

The Electro-Probe introduces a new concept in Dimensional Control.

Write for Literature.

Packaged for convenience

Electro-Probe gage head, self-powered amplifier and accessories, all in one light-weight case ...easily carried from job to job.

FEDERAL PRODUCTS CORPORATION
71710 Eddy Street • Providence 1, R. I.

The Electro-Probe principle has exciting advantages in other fields of gaging. Ask us.

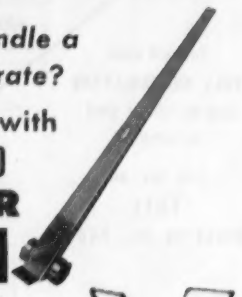
▲ For more details circle NED-135 K7 on enclosed inquiry slip ▲

Did you ever try to handle a HEAVY roll of paper, drum or barrel?

You can do it easily with the IRONBOUND ROL TRUK

Did you ever try to handle a HEAVY machine or crate?

You can do it easily with the IRONBOUND PRY BAR



IRONBOUND

55 Hoffman Place • Hillside, N. J.

For more details circle NED-141 K7 on enclosed inquiry slip

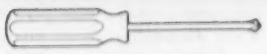
NOW AVAILABLE! NEW

WIRE STRIPPER

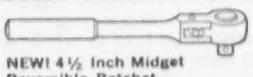
Proto brings you the latest tool designs... first!

No need to change grip on this plier! Use thumb, turn star gauge to desired opening size, notch and strip. Handles 18 to 24 gauge without nicking or cutting. Fast, sure, professional. All New Proto tools are thoroughly job tested before quantity production. When you get them—they're right for the intended work. Complete tool catalog 10¢. Write Proto, 2209 Santa Fe, Los Angeles, Calif.

ANOTHER REASON YOU'LL PREFER PROTO TOOLS



NEW! 2½ Inch Blade #0 Phillips Bit Midget Screwdriver



NEW! 4½ Inch Midget Reversible Ratchet

PROTO TOOLS

PROTO means PROfessional TOols

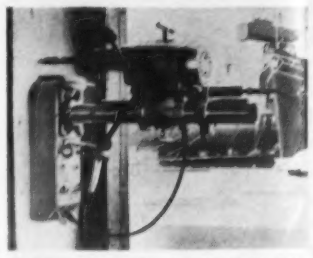
DIVISION OF

50 YEARS 1907-1957

For more details circle NED-142 K7 on enclosed inquiry slip

MAGNETIC DRILL PRESS

readily mounted on ferrous surface, ac-dc unit has 1¼-in. capacity



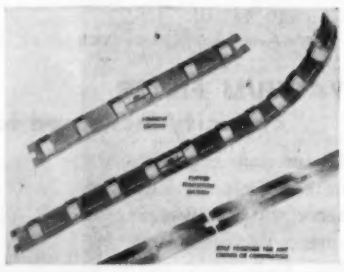
Ability to drill holes within 1/64-in. accuracy is built into the Black & Decker 1¼-in. magnetic drill press. It is designed for continuous operation on alternating or direct current. Powerful, trigger-controlled magnetic base is detachable from drilling unit, thus simplifying mounting drill on any ferrous surface or large equipment. Built-in headlight illuminates area of drill point contact. Drill point locater for exact positioning, two-piece construction for ease of handling, and remote control hydraulic power feed are incorporated.

When used in a suspended position, a safety chain is passed through eyebolts on the press. Remote control enables operator to be up to 6 ft from the operation for convenience and safety. A built-in overload release valve prevents excessive drill point pressure. Equal performance is derived from either type current in forward or reverse. Capacity is 1¼ in. in steel and 1 in. in tapping and reaming steel. Stroke of drill is 15 in. Made by **Black & Decker Mfg. Co.**, Dept. R, 762 E. Pennsylvania Ave., Towson 4, Md.

For more details circle NED-143 K7 on enclosed inquiry slip

CONVEYER MAGNETS

magnetic units for diverse uses made in varied lengths, strengths



Many materials handling and automation problems can be solved with these magnetic Magna-Rail units, offered in various magnetic strengths and a wide range of lengths and shapes. Nonelectric units are bolted together to form long magnets for use on conveying and elevating equipment for handling such items as tin cans, metal parts, assemblies, sheets, and nails.

Fastened under existing or new belt conveyers, the Magna-Rail units transform them into magnetic units for handling parts up inclines as steep as 90 degrees. They can be laid out at steep angles, up or down, or in such a manner as to permit materials to be conveyed suspended from the lower belt surface. Three strengths are made in 3, 4, 5, and 6-ft lengths. Transition section curves on a 15-in. radius for 80 degrees. Replaceable wear plate of stainless steel and special unit lengths can be supplied. Made by **Eriez Mfg. Co.**, 1325 E. 12th St., Erie 6, Pa.

For more details circle NED-144 K7 on enclosed inquiry slip

TINSLEY THICKNESS GAUGE

DUAL-SCALE

A simple and inexpensive gauge for measuring the thickness of non-magnetic coatings such as paints or plating on ferrous bases.

FEATURES

- Easy to use and carry
- Will determine thickness on radii (irregular or curved surfaces present no problem)
- Not affected by vibration and temperature—special Alcomax magnet used
- Negligible error, if any, if used in vertical upside down position, or horizontally
- Will not damage coatings
- An additional scale for special calibrations is on the reverse side of each gauge.

Range: 0.0002 to 0.015 inches (or 0-400 microns)

Mean Accuracy: ± 15% or 0.0001 inch whichever is greater.

Write for BULLETIN 28P1-D

JAMES G. BIDDLE CO.

Electrical & Scientific Instruments

316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-145 K7 on enclosed inquiry slip

Identify parts and accessories FAST!

... use printed Shuford's SHURTAPE®

Label parts and accessories for quicker handling and easier storage with high-strength Shuford's SHURTAPE RP-47.

This printable, rope paper backed pressure-sensitive tape takes ink well, releases easily from the roll and costs less to use.

Comes in white, blue, green, yellow, red and orange.

For more information, write

Shuford Mills, INC. SINCE 1890 HICKORY N. C.

CLOTHES LINES • TWINES
PRESSURE-SENSITIVE PAPER TAPES
SASH CORDS • WEATHER STRIPPING
COTTON & RAYON YARNS • EXTRUDED PLASTICS

2793 World's Largest Manufacturer of Cotton Cordage

For more details circle NED-146 K7 on enclosed inquiry slip

Mail Cart!

Put efficiency in your mail operation! This double-deck polished aluminum mail cart by Chesley lets your mail department categorize incoming mail for quick, error-free delivery. Lower basket for out-going mail. Both baskets are removable.

Write for free brochure — or, better still — order today!

MODEL LS-2 (Legal Size) 26½" L x 19" W x 29½" H (File Folders Not Included)
Shipping Weight — 33 lbs. $45.00 F.O.B. DETROIT

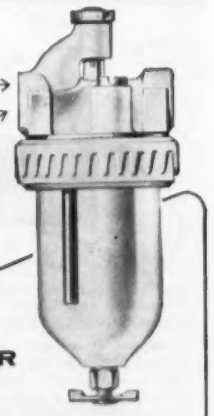
CHESLEY INDUSTRIES

Write Dept. H 24777 Telegraph Road DETROIT 19, MICHIGAN

See this & other Chesley items NAFC, Washington, D. C. Booths 213 & 214.

For more details circle NED-147 K7 on enclosed inquiry slip

HIGH EFFICIENCY LUBRICATION even at LOW FLOW RATES! with WATTS new



AIR LINE LUBRICATOR

Efficient because:

1. **Sub-miniature, high velocity venturi section** positively creates sufficient pressure — even at flow rates as low at one cubic foot per minute — to vaporize oil into a fine mist for uniform, economical lubrication.
2. **Exclusive by-pass pick-up** delivers remainder of air to venturi outlet, thus eliminating the excessive pressure drop associated with other high velocity venturi sections.

Write for complete information on the WATTS LINE of filters, regulators and lubricators with exclusive features for more efficient air supply to pneumatic equipment.

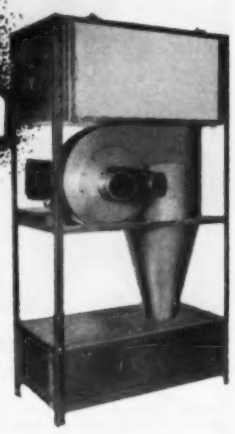
WATTS REGULATOR COMPANY SINCE 1875

20 EMBANKMENT ROAD • LAWRENCE, MASSACHUSETTS

For more details circle NED-148 K7 on enclosed inquiry slip

EFFICIENT–LOW COST

Dust Collection



Easy installation . . . efficient low-cost operation . . . simplified maintenance, make Dustkop *FIRST* among equipment to collect most all industrial dusts. There are Dustkop models to eliminate your dust problems . . . that are space saving, self-contained units, or exhaust type for rafter, ceiling or outside location. Write for descriptive literature.

DUSTKOP STOPS DUST

37 STANDARD MODELS TO CHOOSE FROM

• READY TO USE

Also a Complete Line of Mist Collectors

AGET MANUFACTURING COMPANY
1396 E. CHURCH ST. • ADRIAN, MICHIGAN

▲ For more details circle NED-149 K7 on enclosed inquiry slip ▲

new Formica®
flexible copper clad

fits larger circuits . . . into smaller spaces

The remarkable new Formica flexible copper clad laminated plastics save space like never before. Notice how a 40 square inch flat circuit above is contained in a space only 10 cubic inches!

Works fine, too. There's no shorting because of the insulation the flexible sheet provides.

Flexible copper clad offers the product designer circuits in new shapes . . . plus increased miniaturization. For example, as shown above, an .008" sheet can be confined in a ¾" diameter tube.

For complete information on the design improvement possibilities Formica flexible copper clad holds for your products—civilian or military—write for new FF 89 data sheet. Formica Corporation, subsidiary of American Cyanamid, 4551-7 Spring Grove Ave., Cincinnati 32, Ohio.

Save your engineers... *use Formica-4 ... the complete laminated plastic service*

FI 1417 A

1. Application engineering 2. Research 3. Fabricating 4. Customer stock service

▲ For more details circle NED-150 K7 on enclosed inquiry slip ▲

LIGHTING FIXTURES
have screw-on and clamp-on bases

Air-cooled Therma-Guard reflector assembly on the B series of adjustable industrial lighting fixtures prevents accidental burns to personnel. Typical of units in this series is the illustrated model B-32. Insert shows clamp-on base for model B-32-C. Both have a 100-w burn-proof reflector and a 30-in. work reach. Standard electrical conduit is used, allowing customizing where necessary. All swivels and bases are alloy iron castings and wiring is oil-proof. Made by **Woodward Machine Co.,** Lighting Div., Fixture Dept., 4833 Elmhurst, Detroit 4, Mich.

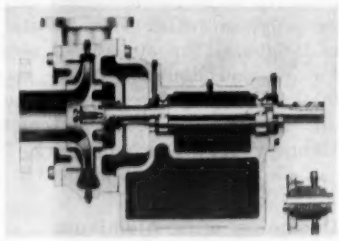
▲ For more details circle NED-151 K7 on enclosed inquiry slip ▲

RUBBER GLOVES
have gripping type fingers, palms

Reinforced and gauntlet type acid models of heavy duty Wil-Gard natural rubber gloves have Firmhold fingers and palms which provide a secure grip for handling heavy objects. Acid gloves are made of 30 to 40 dipped layers of compounded natural rubber. Reinforced gloves are available in medium weight (0.045 in. thickness), in sizes from 9 to 12, and in 14 and 18-in. lengths. Heavy (0.060 in.) and medium thickness gauntlet type gloves are offered in the same sizes and lengths. Made by **Wilson Rubber Co.,** Industrial Div., 1205 Garfield Ave. S.W., Canton 6, Ohio.

▲ For more details circle NED-152 K7 on enclosed inquiry slip ▲

CENTRIFUGAL PUMPS
in 150 to 520 gpm capacities



Line of high-speed, high-head centrifugal pumps for general water service includes 1, 1½, 2, and 3-in. models with respective capacities of 150, 220, 440, and 520 gpm. Features of these BH pumps which assure long service life include stainless steel shafts, oil-lubricated heavy-duty ball bearings, mechanical seals, accurately contoured casings, and hydraulically balanced bronze impellers. Made by **Gardner-Denver Co.,** 1350 Front St., Quincy, Ill.

▲ For more details circle NED-153 K7 on enclosed inquiry slip ▲

HERE THEY ARE!

THE WORLD'S FINEST INDUSTRIAL HEATERS

Gas fired Panelbloc radiant heaters "heat like the sun"—but do a more consistent job. You can enjoy their healthful heat twenty-four hours a day! Automatic. Easy installation. Burns any commercial type gas. Send for information.

PANELBLOC

Take a Cook's tour around the world and you'll find Thermobloc warm air heaters wherever you go. Manufactured and sold in 27 countries. Oil or gas fired. Economical, and they are made in a complete range of sizes for open area heating. No pipes or duct work needed.

THERMOBLOC

Thermobloc Div., Pratt-Daniel Corp. 7-10 Meadow St., So. Norwalk, Conn. Canadian Affiliate: T. C. Chown, Ltd., Montreal - Toronto

Please send bulletins on ☐ Panelbloc ☐ Thermobloc

Name .....

Address .....

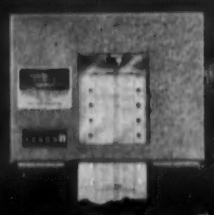
City ..... State .....

▲ For more details circle NED-154 K7 on enclosed inquiry slip ▲

PIN-POINT BOTTLENECKS

TIME RECORDER + TOTALIZER

Boost production in your plant by pinpointing lost time of men and machines. TR+T provides accurate data on any machine, process, operation. Records on-off time. Gives impersonal time-study information, true cost accounting, anticipation of parts replacement. Continuous 4-month tape needs no ink. Used in nation's foremost industries. Brochure on request. $65



standard INSTRUMENT CORP.
657 BROADWAY, NEW YORK

▲ For more details circle NED-155 K7 on enclosed inquiry slip ▲

Why the UNITRAP* is Universal

The Dual-Valve Automatic Pressure Range 0 to 250 lbs.

• Tremendous Capacity • Fast Warmup • Less Wire Drawing • Reduces water hammer • Reduces trap and parts inventory • Completely universal without changes or adjustments • Pipe Sizes ½" through 2". Write for Bulletin 800 D

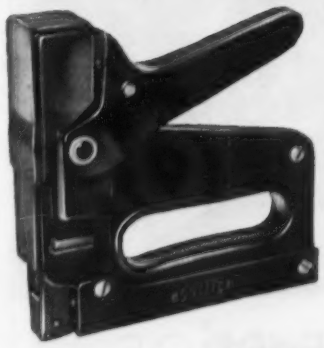
"WHERE *Good Connections* COUNT"®

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N. C.
Baltimore—Buffalo—Camden, N. J.—Chicago—Cleveland
Los Angeles—New York—Providence—Montreal—Toronto

▲ For more details circle NED-156 K7 on enclosed inquiry slip ▲

WONDER TOOL!

BOSTITCH T5 Tacker costs and makes many jobs easier

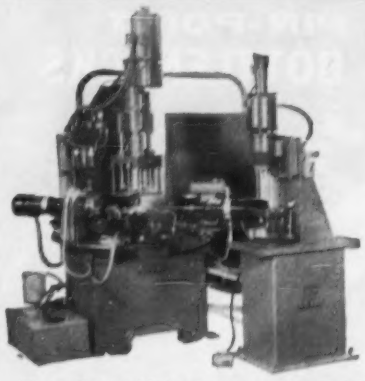


- Insulation
- Ceiling tile
- Metal lath
- Cornerite
- Screening
- Paneling
- Five staple lengths
- An easy squeeze triggers powerful driving action
- Leaves other hand free to steady the work

Look up "Bostitch" in U.S. or Canadian phone book, or write 690 Briggs Drive, East Greenwich, Rhode Island.

Fasten it better and faster with **BOSTITCH®** STAPLERS AND STAPLES

▲ For more details circle NED-157 K7 on enclosed inquiry slip ▲



NEW • Single Operator Dual Machine

How Govro-Nelson Automatic Drilling and Tapping Units can be used to speed up production can be seen in this two-position machine which incorporates 2 vertical and 5 horizontal units for drilling and tapping 12 holes in three similar parts. Two holes are drilled in one position and ten holes are tapped in the second position.

If you have similar operations and would like to speed up your production rate, send samples and part prints and we shall be pleased to recommend the proper Automatic Units or quote on a complete set-up. Literature on request.

GOVRO-NELSON CO.
1933 Antoinette
DETROIT 8, MICH.

Automatic DRILLING UNIT

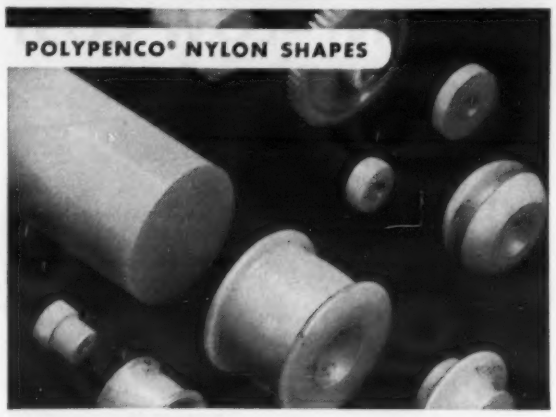
▲ For more details circle NED-159 K7 on enclosed inquiry slip ▲

BALL TABLE TRANSFER STAND
junction for 2, 3, or 4 conveyors

Essentially a circular ball caster table on three adjustable legs, the Traffic Circle transfer stand serves as a junction for two, three, or four gravity conveyor lines. It permits easy routing of objects from any one line to any other lines, or it can be used where a conveyor is shifted to cover a broad area. Outer rim of the table has four sliding support brackets for up to 18-in. wide conveyors which permit any desired conveyor pattern. Spread legs have 6-in. adjustment. Standard model is for indoor service and Nylo ball model is for outdoor service or where equipment must be washed. Made by **M-H Standard Corp.**, 513 Communipaw Ave., Jersey City 4, N. J.

▲ For more details circle NED-162 K7 on enclosed inquiry slip ▲

POLYPENCO® NYLON SHAPES



Nylon maintenance parts out-perform parts they replace

Tough, long-wearing nylon parts, machined rapidly and accurately from Polypenco nylon stock shapes are providing these definite advantages in more and more maintenance applications:

- *Wear resistance*
- *Resiliency*
- *High strength/weight ratio*
- *Low coefficient of friction*
- *Chemical resistance*
- *Noise dampening*
- *Good electrical insulation*
- *Abrasion resistance and non-galling*

Polypenco nylon shapes—which include rod, bar, tubular bar, strip and plate—are available for immediate delivery from warehouses located throughout the country. Polymer also maintains a custom fabricating service to produce parts. Write today for data on products and services.

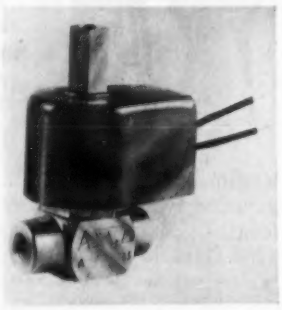
THE POLYMER CORPORATION OF PENNA.
Reading, Penna.
Export: Polypenco, Inc., Reading, Penna., U.S.A.

POLYPENCO

POLYPENCO nylon, POLYPENCO Teflon†, NYLAFLOW® and NYLATRON® GS
†DU PONT TRADEMARK

▲ For more details circle NED-166 K7 on enclosed inquiry slip ▲

THREE-WAY SOLENOID VALVE
midget unit in 1/8 and 1/4-in. sizes



General purpose, midget size solenoid valves in 1/8 and 1/4-in. pipe sizes can be applied to any three-way valving requirement regardless of direction of flow, or points of pressure application. Featuring packless construction with only one moving part, valves operate in any position on voltages up to 550 v ac, 25 cycles and 250 v dc. Pressure range is 0 to 300 psi. Available constructions include the universal type with pressure at any orifice; normally-closed for air service only, in which valve vents to atmosphere; normally-closed for air and liquids; and normally-open for air and liquids. Brass or stainless bodies with integral crown type seats assure perfect seating without leakage. Made by **Automatic Switch Co.**, 52-AA Hanover Rd., Florham Park, N. J.

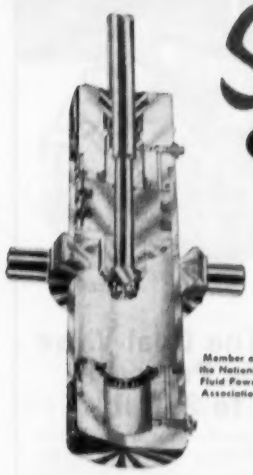
▲ For more details circle NED-163 K7 on enclosed inquiry slip ▲

Designing with Aluminum

Aluminum Co. of America—All available Alcoa literature and motion pictures of interest to designers and design engineers is discussed in "Bibliography of Information about Aluminum for the Designer." Forms for ordering literature are included.

▲ For more details circle NED-164 K7 on enclosed inquiry slip ▲

all the **EXTRAS** are standard with



T-J Spacemaker CYLINDERS

Member of the National Fluid Power Association

- **NEW** *exclusive* ingenious cushion designs . . . Super Cushion Flexible Seals for Air . . . New Self-Aligning Master Cushion for Oil.
- **STRONGER** than outmoded tie rod design, proven through actual tests. No tie rods to stretch.
- **SOLID STEEL HEADS** throughout the full line.
- **COMPACT DESIGN** eliminates tie rods, increasing the strength and reducing mounting space required, providing extra room for adjacent equipment.
- **HARD CHROME PLATED** body bores and piston rods . . . assure you of long trouble-free service. (Standard at no extra cost.)
- **METALLIC ROD SCRAPER**, not just a wiper, actually removes foreign matter from the rod.
- **PILOTED PACKING GLAND** with extra long bearing. Additional strength and support to the piston rod.
- **OIL** pressure to 750 p.s.i. AIR to 200 p.s.i.

DELIVERY OFF THE SHELF!

NEW LITERATURE—Send today for new Catalog SM56 with complete engineering details on Spacemaker line. Write The Tomkins-Johnson Co., Jackson, Mich.

T-J **TOMKINS-JOHNSON**
VALVES · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

▲ For more details circle NED-160 K7 on enclosed inquiry slip ▲

GASKETS · SHIMS WASHERS

From 1 to 1 Million

No matter what type, thickness, shape or quantity required, you can count on Chicago-Wilcox for uniformly accurate gaskets, shims, washers or special stampings.

With 50 years accumulation of dies, chances are we can furnish just what you need without a die charge—thus reducing costs substantially and assuring on-schedule delivery.

Gaskets, shims and washers can be supplied in metallic, non-metallic and plastics . . . teflon, nylon, etc. . . . and in quantities to meet your production requirements.

Write for catalog and submit your specifications for quotation.

CHICAGO-WILCOX MFG. CO.
7713 South Avalon,
Chicago 19, Illinois

▲ For more details circle NED-165 K7 on enclosed inquiry slip ▲

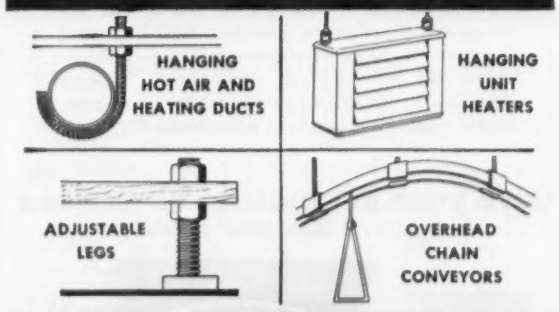
For Small Production Runs
Cut Your Studs, Bolts, Hangers from REDI-BOLT®

CONTINUOUSLY THREADED STEEL RODS
13 SIZES, 3/16" TO 1 1/2"

Small-run requirements for special studs, bolts, etc., are easy to handle, if you have a supply of REDI-BOLTS on hand. Just cut REDI-BOLT to the length you need and add standard nuts. No threading necessary. These continuously threaded steel rods eliminate the need for "big" special-bolt inventories and the expense of small-quantity purchases.

All 13 diameters are supplied in standard lengths of 24" and 36"; other lengths on special order. Precision threaded in two sizes: *Standard National Coarse* and *SAE (National Fine)*. Available with zinc plate or regular rust-resistant finish. Order a supply of various diameters, today.

IDEAL FOR 101 INSTALLATION, REPAIR, AND MAINTENANCE JOBS, TOO!



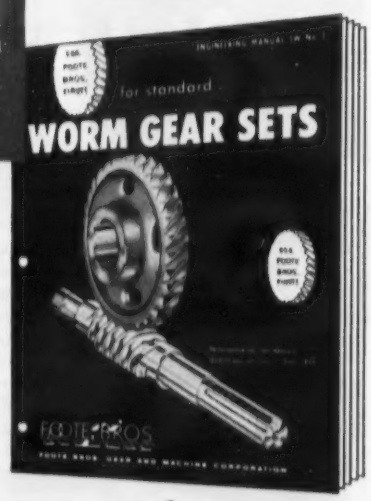
Made by the makers of REDI-ROD Steel and Aluminum Bars

Ask your Mill Supply House, or write
REDI-BOLT, Inc., 5312 Indianapolis Blvd., East Chicago, Ind.

▲ For more details circle NED-167 K7 on enclosed inquiry slip ▲

free!

GUIDE TO BETTER WORM GEAR SELECTION



Here's complete information on Foote Bros. famous worm gear sets—plus simple-to-follow selection procedure and helpful design suggestions. Engineering Manual SW No. 1 is your guide to proven worm gear performance. Write for it today!

FOOTE BROS.
Better Power Transmission Through Better Gears
FOOTE BROS. GEAR AND MACHINE CORPORATION
4569 S. Western Blvd., Dept. NE,
Chicago 9, Illinois

▲ For more details circle NED-161 K7 on enclosed inquiry slip ▲

HAMILTON CASTERS FOR *Every Industrial Use!*

The Hamilton caster line is extensive and exceptionally complete! Hamilton manufactures hundreds of styles and sizes, including swivel and rigid casters of forged steel, plate steel, cast steel, pressed steel and semi-steel. Single and double-wheel models. Wide range of capacities—up to 2,500 lbs. per caster.

Wheels available include steel, semi-steel, molded-on rubber-tired wheels, renewable rubber tires, full pneumatics, semi-pneumatics, molded plastic and composition rubber wheels. If you use industrial casters—whatever the application, whatever the quantity—get a quotation from Hamilton. Write today and tell us your requirements.

SEND FOR YOUR COPY OF THE HAMILTON CASTER & WHEEL CATALOG

Hamilton
CASTER & MFG. COMPANY
1659 Dixie Highway, Hamilton, Ohio

▲ For more details circle NED-168 K7 on enclosed inquiry slip ▲

Send Now For Facts On Bulk Materials Handling . . .

BULLETIN FK-26A

Fuller-Kinyon Bulletin FK-26A describes how a Fuller-Kinyon conveying system specially designed for dry bulk materials handling to meet your specific requirements can cut handling costs, increase efficiency, provide top sustained production with minimum maintenance. This bulletin demonstrates the many applications of these conveying systems in solving tough dry bulk materials handling problems.

Now, while you think of it, send for Bulletin FK-26A on improved materials handling methods and systems.

3750
P-167

Fuller pioneers in harnessing AIR

FULLER COMPANY,
154 Bridge St., Catasauqua, Pa.

SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION
Chicago • San Francisco • Los Angeles • Seattle • Kansas City • Birmingham

▲ For more details circle NED-169 K7 on enclosed inquiry slip ▲

You can cut your GLOVE COSTS

with the authorized

JOMAC COST-REDUCTION PLAN

send for free booklet

It contains dollars-and-cents proof that glove costs can be reduced. Write today to Jomac Inc., Dept. G, Phila. 38, Pa., and ask for "Evidence" booklet.

JOMAC INDUSTRIAL GLOVES
Plants in Philadelphia, Pa., and Warsaw, Ind.
In Canada: Safety Supply Company, Toronto

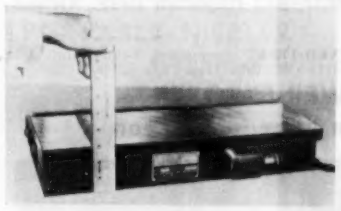
▲ For more details circle NED-170 K7 on enclosed inquiry slip ▲

DUST COLLECTOR
features extra large storage bin

Only 10 in. higher than standard model 520, this Dustkop model 520-D dust collector has a storage bin that is more than twice as large. Unit has the same air handling characteristics and base dimensions as the 520, but is recommended for metalworking shops where dust volume is unusually large. Base is 18 x 23 in. and height is 34 in. Made by **Aget Mfg. Co.**, 1396 E. Church St., Adrian, Mich.

▲ For more details circle NED-171 K7 on enclosed inquiry slip ▲

MAGNETIC CHUCK
seven low-height models offered



Maximum working height under the grinding wheel is possible with the model CL low-height electromagnetic chuck. Only 2⅞ in. high, it has a fine-pole laminated top and steel welded construction. Holding power is uniform to the extreme edges of the face plate. Moistureproof and shockproof chuck, furnished with rectifier and built-in switch, is made in 5 x 10, 6 x 12, 6 x 18, 8 x 18, 8 x 24, 10 x 15, and 10 x 16-in. sizes. It plugs into any 115-v alternating current line. Made by **Hanchett Magna-Lock Corp.**, 475 Maple St., Big Rapids, Mich.

▲ For more details circle NED-172 K7 on enclosed inquiry slip ▲

TWO-PERSON WASH BOWL
stainless and enameled steel types

Touch of the foot treadle controls the water served by the sprayhead of the easily installed Duo-Washfountain. The two-person bowl is self-flushing, preventing collection of used water. Bowls are of stainless steel or pressed steel finished in acid - resisting vitreous enamel in white or five colors. Standard height from floor to bowl rim is 31 in. Hinged treadle folds up to facilitate cleaning of floor. Made by **Bradley Washfountain Co.**, 2253 W. Michigan St., Milwaukee 1, Wis.

▲ For more details circle NED-173 K7 on enclosed inquiry slip ▲

DUTCH BRAND PLASTIC TAPE

Waterproof, weatherproof . . . resists 1000 volts per mil of thickness . . . conforms to irregular shapes . . . stretches up to 150%. Get full information. Send for "Big Four in Electrical Tapes," our new free booklet!

JOHNS MANVILLE JM PRODUCTS

Johns-Manville Dutch Brand Products
7800 South Woodlawn Avenue
Chicago 19, Illinois

JOHNS-MANVILLE

▲ For more details circle NED-174 K7 on enclosed inquiry slip ▲

YALE ELECTRIC TRUCKS

For smooth handling – Exclusive Magnetic Cam-O-Tactor controls acceleration, assures jolltless starts, shock-free travel.

For safe driving – Lowered cowl and "open-vision" uprights provide extra forward visibility.

For smooth, fast lifting – Side-thrust rollers reduce stress, compensate for off-center loading. New roller channel construction reduces friction in lifting and lowering.

Capacities: 1,000 to 150,000 lbs. For full facts, write The Yale & Towne Mfg. Co., Philadelphia 15, Pa., Dept. A-3710A.

YALE* INDUSTRIAL LIFT TRUCKS AND HOISTS
*REG. U. S. PAT. OFF.

▲ For more details circle NED-175 K7 on enclosed inquiry slip ▲

today's most "able" HAND TYPE CLEANER by IDEAL

• VACUUMS
• BLOWS • SPRAYS
• DRIES*

HEAVY DUTY MODEL. Medium and Light Duty models also available.

Capable . . . Delivers efficient, economical, all-around service — whether you use it as a vacuum, blower, sprayer or drier*. Cast aluminum housing, streamlined and light in weight, makes possible long, continuous use without operator fatigue.

*Heater Nozzle available for Light Duty Model only.

Durable . . . Outlives lesser cleaners because it is ruggedly built to withstand the roughest industrial use. Heavy Duty 1½ H.P. motor, air-cooled for extra long life, blows at a velocity of 26,500 feet per minute.

Adaptable . . . Economically converts to Tank Type cleaner in less than a minute. Choose from either of two Conversion Packs:

1. TANK CONVERSION PACK

Multiply the usefulness of IDEAL'S Heavy and Medium Duty Hand Type Cleaners by converting to a powerful, all-purpose STANDARD Cleaner. Conversion Pack consists of wheel-mounted 12-gallon steel tank and large dust-tight bag.

2. 55-GALLON DRUM CONVERSION PACK

For IDEAL'S Heavy Duty Hand Type Cleaner. A Conversion Pack consisting of (1) cast aluminum cover and (2) dust bag; and your own 55-gallon drum, gives you a "king-size" industrial tank type cleaner. Four-wheel dolly optional.

Sold Through America's Leading Distributors
In Canada: Irving Smith, Ltd., Montreal

IDEAL INDUSTRIES, INC.
1032-J Park Avenue, Sycamore, Illinois

Please send me full catalog data on IDEAL'S Hand Type Cleaners and Conversion Packs.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

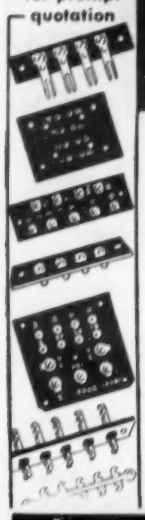
▲ For more details circle NED-176 K7 on enclosed inquiry slip ▲

Send your specifications for prompt quotation

Hundreds of standard

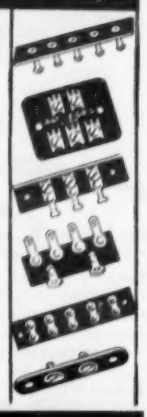
JONES TERMINAL PANELS

Complete Equipment FOR SPECIALS



JONES MEANS Proven QUALITY

Several pages of Jones Catalog No. 21 illustrate standard and special panels we are constantly producing. Latest special equipment enables us promptly to produce practically any panel required. Send print or description for prices without obligation. Hundreds of standard terminal strips also listed. Send for Catalog, with engineering drawings and data.



Jones HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle NED-177 K7 on enclosed inquiry slip

CANTON STOKERS

Flo-tube

THE WORLD'S MOST ADAPTABLE SCREW CONVEYOR

★ SAVES TIME
★ SAVES MANPOWER
★ SAVES SPACE

FOR MOVING OR FEEDING CHEMICALS, COAL, GRAVEL, SALT, SAND, SAWDUST, SUGAR, WOOD CHIPS AND OTHER BULK MATERIALS.

Flo-tube screw conveyors automatically pick up bulk materials from bins and piles . . . and maintain predetermined delivery rates to processing machines or collecting hoppers.

Saves Time. With automatic controls, Flo-tube saves up to 95% on general applications . . . from 80% to 90% for moving coal in boiler rooms.

Saves Manpower. Flo-tube works tirelessly with only minimum supervision of manual or automatic controls. It eliminates manual handling, moving and carrying.

Saves Space. Moving materials horizontally, vertically and at any angle of incline, Flo-tube effects substantial savings in aisle and floor space.

For complete information about Flo-tubes ability to feed bulk materials dependably . . . cleanly . . . economically . . . mail this coupon today.

1907 50th 1957 CANTON STOKERS 50 YEARS OF PROGRESS

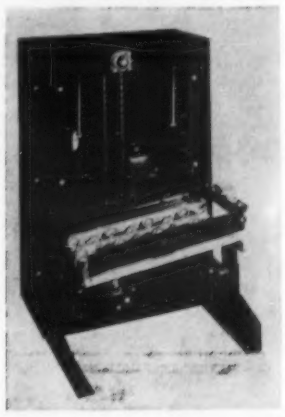
N-563-CB

CANTON STOKER CORPORATION
102 Andrew Place S.W
Canton 1, Ohio

Canton Stoker Corporation
102 Andrew Place S.W., Canton 1, Ohio
Please send full details about Flo-tube for moving _____
Firm _____
Individual _____ Title _____
Street _____
City _____ Zone ____ State _____

For more details circle NED-178 K7 on enclosed inquiry slip

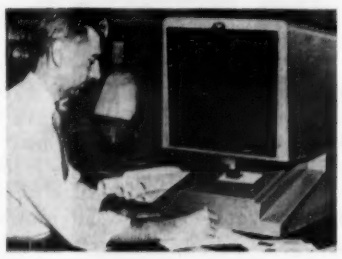
VERTICAL TRANSFER UNIT reverses direction of conveyer flow



Direction of material flow in a conveying system is reversed without use of 180-degree curved conveyer sections by this vertical transfer unit. Operating in a minimum of space, it accomplishes direction change by a self-supported, automatic, vertical lift which can be placed at the end of two conveyer lines located in a direct vertical plane. Lines must be spaced to allow clearance for materials being handled. Unit can be used with gravity or power-driven conveyer systems, in descending or ascending lines of flow. It can feed to or from two or more levels of conveyer track. Made by **Rapids-Standard Co.**, Dept. NED, 342 Rapistan Bldg., Grand Rapids 2, Mich.

For more details circle NED-179 K7 on enclosed inquiry slip

MICROFILM VIEWER-EXPOSER has 14 x 14-in. viewing screen



Viewing or reproducing of engineering drawings, specification sheets, personnel records, and other documents is possible with the Examiner, a desk-top model microfilm viewer and exposing unit. It has a slightly tilted 14 x 14-in. viewing screen and a lens with 15, 20, 24, 30, and 43X magnifications. Redesigned unit has increased lamp wattage for greater screen illumination and higher reproduction resolution. Optional multiple scanner attachment simplifies scanning of multiple frames of microfilm mounted in Filmsort card apertures, jackets, or in new sheet films. Blower-cooled viewer has an all-metal cabinet and is priced at $475. Made by **Dexter Folder Co.**, Filmsort Div., Dept. N, 50 S. Pearl St., Pearl River, N. Y.

For more details circle NED-180 K7 on enclosed inquiry slip

Air-Operated Chucks, Cylinders

Cushman Chuck Co.—80-page catalog P.O. 65 which describes line of air-operated chucks, cylinders and accessories, is divided into seven step-cut sections for quick reference to chuck or cylinder data. Practically all air-operated setup and tooling requirements can be met by the selection of equipment listed. Included is a new series of aluminum body chucks and cylinders.

For more details circle NED-181 K7 on enclosed inquiry slip

Don't ruin a valuable piece of equipment merely because some part is rusted tight. Apply Kroil, the amazing new chemical lubricant that creeps into millionth inch spaces (proved by laboratory tests), dissolves rust, supplies necessary lubrication and

LOOSENS FROZEN PARTS

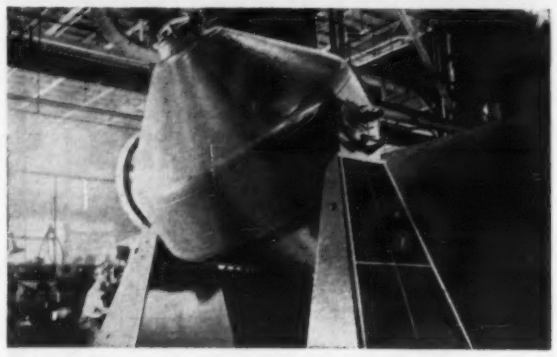
18,000 of America's leading plants can't be wrong! They have used KROIL for 10 years and are still depending on it to save expensive labor and valuable parts. They say: "Kroil loosened bushings after a 12-ton press had failed" . . . "on repairing heat treat trolleys formerly destroyed every nut. Now Kroil saves them all, and time, too" . . .

You too should be using KROIL every day. Try it on money-back basis. Gallon $4.00; with Kroiler trigger squirt gun (shoots a drop or a stream 15 feet, if desired) $4.95, f. o. b. our factory.

KANO LABORATORIES 1074 Thompson Lane, Nashville 11, Tenn.

KANO LABORATORIES

For more details circle NED-182 K7 on enclosed inquiry slip



NOW . . . dry and blend in one operation *in just hours*

New you can dry wet solids and blend them in a single operation and cut processing time from days to hours.

Wet batch goes directly from process into the Pfaudler glassed steel *conical dryer-blender*—you save materials handling time.

This dryer-blender tumbles the wet material exposing maximum surface area to heat and vacuum to speed up drying. Tumbling action also blends drying material to homogeneous product.

Even *corrosive materials* can be handled, since this unit is of glassed steel construction. The acid-alkali-resistant glass lining protects product from metal contamination.

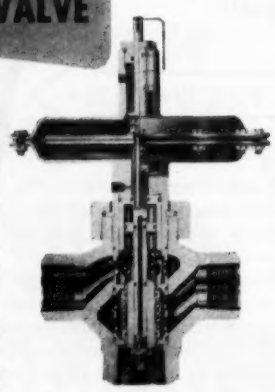
The smooth surface of the glass makes for easier cleaning since product doesn't readily adhere to it.

Working capacity ranges from 2.6 to 165 cu. ft. For details, write Dept. NED-107 for Data Sheet No. 26.

THE PFAUDLER CO.
Rochester 3, N.Y.
Specialists in Corrosioneering

For more details circle NED-183 K7 on enclosed inquiry slip

got **THREE-WAY THREE-POSITION CONTROL VALVE**



Here's the solution to many of your flow control problems. Designed especially for service as a manifold valve in automatic systems, the GOT Type "CPC" Valve is extremely simple in design and construction, with all parts accessible for cleaning, repair or replacement without removing the valve body from the line. The inner valve is pressure-balanced for positive operation, and gives guaranteed bubble-tight closure against gas or liquids. The GOT-developed "huddling chamber" design protects valve seat and disk against cutting, and permits re-sizing without seat and disk replacement. For complete information, write for Catalog No. 256 MVC.

Garrett Oil Tools, Inc.
P. O. BOX 2427 • LONGVIEW, TEXAS
DIVISION OF U. S. INDUSTRIES, INC

For more details circle NED-184 K7 on enclosed inquiry slip

WOLVERINE turntable DOWN DRAFT dust collecting benches

Type BT

Save Operating Time, Improve Work

Revolving turntable permits continuous operation with no time lost in repositioning the casting.

PLUS — Superior dust collection due to higher down draft velocity (standard 300 feet per minute or, if application requires, velocities up to 800 feet per minute). Heavy duty industrial viscous filters in rear compartment remove dust from air stream and axial flow fan in top of compartment exhausts air vertically indoors or out, as required.

This makes the perfect system for collecting dust from grinding, polishing and sanding operations.

Write for bulletin describing both the Turntable and Standard Wolverine Rectangular Dust Collecting Benches.
Dept. N

WOLVERINE EQUIPMENT CO.
31 MAIN STREET, CAMBRIDGE 42, MASS.

For more details circle NED-185 K7 on enclosed inquiry slip

Cable Clips

stocked for you at Whitehead Metal "Supermarkets"

fasten wire or tubing quickly, minimize short-circuit danger with plastic clips

These little clips go on fast and require no extra insulation cushion—it's built-in. What's more, the plastic resists corrosion and abrasion so you can clip wire or tubing with these supports even when service conditions are severe. Available in 23 sizes, from 1/16" to 3" diameter, from your nearest Whitehead warehouse. You have your choice of materials, either nylon, teflon or ethocel (ethyl cellulose). Try one, write for sample.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.

For more details circle NED-186 K7 on enclosed inquiry slip

Tread Plate

stocked for you at Whitehead Metal "Supermarkets"

flooring surfaces skid-proofed when you install abrasive or diamond embossed corrosion resistant plates

Lightweight Alcoa aluminum tread plates make dangerous walking areas safe for your personnel. Suitable for use in corrosive conditions, these easily installed plates come in modular sizes, 48" and 60" widths and 192" lengths. Your choice of surfaces, either rough irregular abrasive, or diamond embossed patterns. Whether you want material for surfacing a stair landing or an entire floor, Whitehead has it stocked ready for delivery to your job site. See the many possible applications, write for Tread Plate Bulletin.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.

For more details circle NED-187 K7 on enclosed inquiry slip

Hose & Fittings

stocked for you at Whitehead Metal "Supermarkets"

buy your hose assemblies with guaranteed, matched fittings to harness fluids, gases

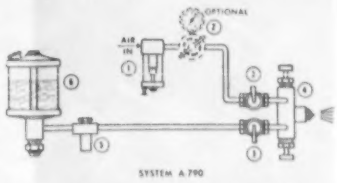
Faulty pressure lines are often caused by coupling flexible hose assemblies with improper fittings. Whitehead stocks fittings designed exactly for the hose length you order. All medium and high pressure hose lengths, from 3/16 to 1-13/16 I.D., are available in assemblies using your choice of swivel nut, male pipe thread or flare nose fittings. These corrosion resistant fittings are finely threaded to fit snugly into the hose lengths. For full details, write for Hose & Fitting Bulletin.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.

For more details circle NED-188 K7 on enclosed inquiry slip

OIL SPRAYING SYSTEMS
atomize oil for various operations

Compressed air atomizes oil through a spray valve in a series of pneumatic spray systems for use in grinding, milling, drilling, tapping, reaming, sawing, punching, sheet stock oiling, and other operations. They can also oil hot chains, cams, cables, and die casting molds. Pneumatic spray valves can be used for gravity, syphon, or pressure operated systems. External mixing type valves produce a round spray pattern. Each has two needle valves for controlling air and oil flows. Systems can incorporate gang-mounted valves, each individually adjustable. Types with nozzle on the valve or with nozzle mounted at a remote point are available. Made by **Oil-Rite Corp.**, 2364 Waldo Blvd., Manitowoc, Wis.



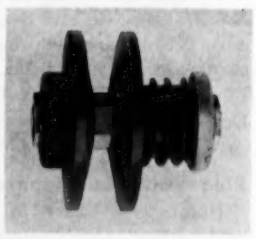
For more details circle NED-189 K7 on enclosed inquiry slip

PORTABLE NIBBLER
cuts titanium without distortion

Improved model HN portable nibbler will cut titanium, stainless steel, and all types of nonferrous metals without distortion on either side of cut. Edge of cut is ready for fabricating. Tool cuts up to 55 ipm, with minimum radius of 6 in. For a 3-in. radius, a special die holder is offered for use on 12-gage stainless and lighter metal. The 13 in. long, 13-lb nibbler operates on 115-v ac or dc, with a 220-v unit being optional. Made by **Fenway Machine Co.**, Willow Grove, Pa.

For more details circle NED-190 K7 on enclosed inquiry slip

VARIABLE SPEED PULLEY
of glass fiber impregnated nylon



Molded of glass fiber impregnated nylon, model VP-1 variable speed pulley is designed for fractional horsepower ¼-in. V-belt drive. Unit measures 1⅞ in. OD and has maximum 1⅝-in. pitch diameter. It has range of 2¼ times and a spring-loaded tension, with shaft bores of ¼, 5/16, and ⅜ in. Typical uses include drive mechanisms for instruments and servo systems, business machines, and aircraft devices. Weighing less than 3 oz, unit is self-lubricating, has extreme chemical resistance, and long-wearing qualities. Made by **Rampe Mfg. Co.**, 14901 Woodworth Ave., Cleveland 10, Ohio.

For more details circle NED-191 K7 on enclosed inquiry slip

Wire Mesh

stocked for you at Whitehead Metal "Supermarkets"

standard weaves in 8 corrosion resistant alloys eliminate endless shopping for you

Looking around for the right combination of weave and metal can be a vexing problem in buying wire cloth because some manufacturers make just one style or use only one alloy. At Whitehead, you can choose from twilled, corduroy, calendered or standard weaves in aluminum, brass, bronze, copper, monel, nickel, inconel or stainless steel. There's really little need to keep large supplies on hand for your production... Whitehead stocks and delivers to fit your schedule. Further information by writing for Wire Mesh Bulletin.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.

For more details circle NED-193 K7 on enclosed inquiry slip

Fasteners

stocked for you at Whitehead Metal "Supermarkets"

the "special" you need is probably *standard* at Whitehead

Everything in fasteners from boat nails to tenter hooks is stocked at Whitehead. Why bother checking around for who makes some particular type of fastener? Call Whitehead and it's a safe bet it's already stocked for you. Metals galore, too, all corrosion resistant like aluminum, brass, bronze, copper, silicon bronze, monel, nickel, inconel and stainless steel. Flocks of fasteners like tacks, pins, rivets, nails, staples, bolts, hooks and clips. For a quick check for the right fastener, use Whitehead's handy wall chart, yours for the asking.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.

For more details circle NED-194 K7 on enclosed inquiry slip

Rod, Sheet and Tube

stocked for you at Whitehead Metal "Supermarkets"

just one shopping stop and you get delivery of any corrosion resistant metal in the form and quantity tailored to your fabrication needs

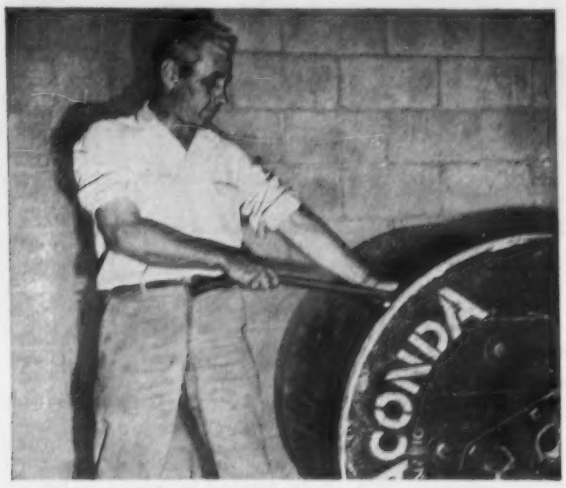
Read off your shopping list: rods—you can get them round, hexagonal, rectangular, square...sheets—you can have hot or cold rolled in a host of alloys...tubes and pipes—come round, rectangular or square. Everything stocked in a wide variety of sizes for you to select from...Just look at some of the alloys: aluminum, brass, copper, phosphor bronze, nickel silver, silicon bronze, leaded brass, nickel, inconel. They're products of such leading manufacturers as: Alcoa, Inco, Anaconda, Superior or Trent Tube, Lukens. No matter what type of corrosion resistant material you need (plastics, too) Whitehead has the *right* materials for you. And, if you're uncertain as to just which metal is best for you to use, Whitehead engineers will be glad to work with you to get the most out of what you buy.

WHITEHEAD
METAL PRODUCTS COMPANY, INC.

303 West 10th Street • New York 14, N. Y.

Other Offices and Warehouses:
PHILADELPHIA • BUFFALO • HARRISON, N. J.
CAMBRIDGE, MASS. • SYRACUSE • BALTIMORE
ROCHESTER • WINDSOR, CONN.

For more details circle NED-192 K7 on enclosed inquiry slip



ALL-PURPOSE DURASHEATH CUTS COST

Anaconda's neoprene-jacketed Durasheath* cable cuts installation costs because it can be installed in ducts, buried, aerially or any combination of these *in one run—with minimum splicing.* It reduces maintenance and replacement costs because its rugged jacket resists abrasion, moisture, corrosive chemicals and oils that shorten ordinary cable life. Available in all sizes, single and multiple conductor, copper or aluminum, 600 to 15,000 volts. For full information, write: Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y. 57859

ANACONDA®

*Reg. U.S. Pat. Off.

▲ For more details circle **NED-196 K7** on enclosed inquiry slip ▲

Cost-saving Short-cuts to finished product parts

"custom-made" shapes of *Carpenter* STAINLESS TUBING

When you want to provide the functional and decorative advantages of stainless steel in hollow, specially-shaped parts of any products you make, be sure to investigate the economies of using Carpenter Stainless Shaped Tubing. It can save you production time, money and material in translating designs into finished parts.

Rectangular, square, oval, half-round, diamond, triangular, fluted, drip-lip, and various other special cross-sectional shapes of Carpenter Stainless Tubing are obtainable for pressure, mechanical, structural and sanitary services. They can be supplied in over 20 stainless and special corrosion-resistant analyses with a wide variety of surface finishes. Sizes and gauges available depend upon shapes and analyses desired.

Find out how Carpenter Stainless Shaped Tubing can possibly benefit your product and production costs. Your nearby Carpenter Representative or Distributor will be glad to help you determine the tubing best suited for your parts requirements. Ask for Selecting and Buying Guide, Bulletin TD 120.

MEMBER

The Carpenter Steel Company
Alloy Tube Division, Union, N. J.

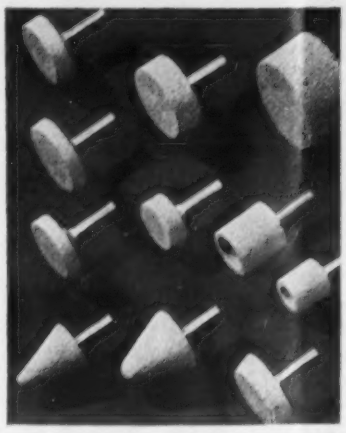
Export Dept.: The Carpenter Steel Co., Port Washington, N. Y.—"CARSTEELCO"

Carpenter

Stainless Tubing & Pipe

▲ For more details circle **NED-197 K7** on enclosed inquiry slip ▲

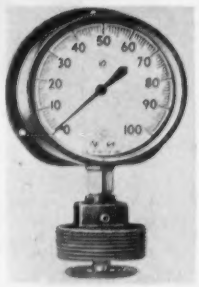
MOUNTED GRINDING WHEELS in all standard shapes and sizes



Embodying the V40 vitrified bond introduced over two years ago, this new line of V40 mounted wheels includes all standard shapes and sizes, as well as gradings to meet all precision grinding requirements. The V40 bond assures exceptional strength and free-cutting qualities for extra-fast stock removal. Wheels hold size and shape well, even on hardest of metals. Wheels can be supplied with hard, nickel-plated mandrels in variety of sizes to fit various chucks. Special cement, high in strength and hardness, anchors the abrasive. Made by **Carborundum Co.**, Bonded Abrasives Div., Dept. NED, Box 337, Niagara Falls, N. Y.

▲ For more details circle **NED-198 K7** on enclosed inquiry slip ▲

PRESSURE GAGE for use with various chemicals



Accurate and sensitive pressure measurement of such hot liquids as asphalt, coal tars, byproduct residues, and other viscous fluids is possible with the short, compact No. 2594 gage. Present model has a type 316 stainless steel diaphragm, but it can be made of any metal which can be formed and welded as a capsule. The 2½-in. NMPT on its body can be inserted in any type of pipe fitting, preferably above fast-flowing viscous fluids. Temperatures from ambient to 200° F use a glycerine and water filling solution; silicone oil is used for operating temperatures from 200 to 500° F. Standard dials are 3½, 4½, 6, and 8½ in. diameter. Maximum pressure ratings are 1000 and 2000 psi, respectively, when subjected to high and normal temperatures. Made by **American Chain & Cable Co.**, Helicoid Gage Div., Dept. NED, 929 Connecticut Ave., Bridgeport 2, Conn.

▲ For more details circle **NED-199 K7** on enclosed inquiry slip ▲

Plug Valve Lubricants

Homestead Valve Mfg. Co.—Lubricant recommendations for nearly 4000 service conditions in which lubricated plug valves can be used are given in 16-page Section 5A of Reference Book 39. It also shows lubricated plug valve accessories, fittings, automatic lubricators and lubricant guns. Service temperatures for these lubricants range from − 65 to 600° F.

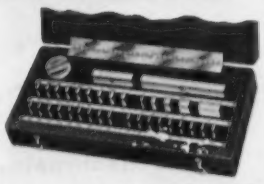
▲ For more details circle **NED-200 K7** on enclosed inquiry slip ▲

ULTRA-CHEX GAGE BLOCKS *for Every Need!*

Supplied in one Superior Accuracy

5 MILLIONTHS ± ACCURACY

82 Block Set
$260.00 Complete
This Set will supply the needs of any discriminating shop that must work to gage-block precision.



34 Block Set $125.00
WITHOUT OPTICAL PARALLEL

9 Block Set
$24.75
OPTICAL PARALLEL **$6.00**

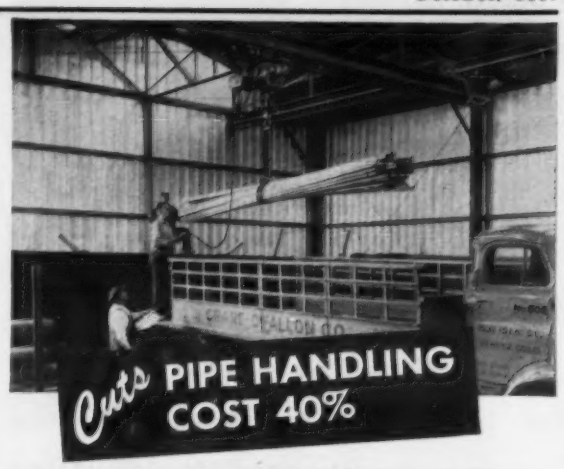
QUICK DELIVERY ON ALL SETS

All Sets at "Money Saving Prices" due to Mass Production Methods.

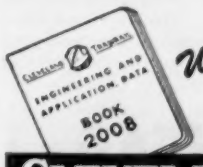
WRITE FOR FULLY ILLUSTRATED CATALOG -- Code GIPFY

GEORGE SCHERR CO., Inc.
COMPLETE LINE OF PRECISION INSTRUMENTS
200ND LAFAYETTE STREET • NEW YORK 12, N.Y.

▲ For more details circle **NED-201 K7** on enclosed inquiry slip ▲



A Cleveland Tramrail motor-driven crane so speeded the handling of pipe out of railroad cars and into trucks for immediate delivery, or into storage, that a 100,000 lb. carload can now be handled for what it formerly cost to unload a 60,000 lb. car. This is typical of the big savings that are being made with well engineered overhead Cleveland Tramrail crane systems.



Write FOR BOOK NO. 2008

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6654 East 285th St., Wickliffe, Ohio

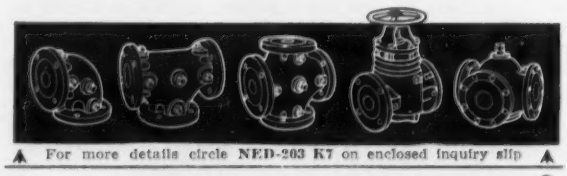
CLEVELAND TRAMRAIL

▲ For more details circle **NED-202 K7** on enclosed inquiry slip ▲

H&B JACKETED PIPE and FITTINGS

● The above cutaway illustrates H & B standard jacketed welded pipe and fitting construction, designed to allow complete jacketing of the product pipe. Special jigs and fixtures enable H & B to insure complete uniformity of the jacket area in relation to the O D of the product line and the I D of the jacket pipe. All H & B jacketed equipment is hydrostatically tested at 450 to 500 p.s.i. H & B welded steel jacketed fittings are ideally suited for process piping of pressures reaching 300 p.s.i. and temperatures up to 750°F.... A few of these fittings and valves are illustrated below. For more information send for bulletin J-57.

HETHERINGTON & BERNER INC.
719 Kentucky Ave. Indianapolis 7, Ind.



▲ For more details circle **NED-203 K7** on enclosed inquiry slip ▲

a better transfer method from Rapistan ®

AVOID PRESS DOWNTIME WITH NEW RAPISTAN SLAT CONVEYOR UNIT

A new, heavy-duty transfer unit for moving large, difficult-to-handle items, such as car door panels, safely between presses or assembly lines. Unit lengths to 15', 12" to 48" wide.

Rapistan No. 700 Slat Conveyor eliminates loss of production due to failure of parts transfer equipment. Receives heavy, sharp-edged parts safely, without danger to conveyor belt through misalignment or cutting. Interlocking slats are soft rubber, hard rubber, wood or steel. For full information write to

Rapistan

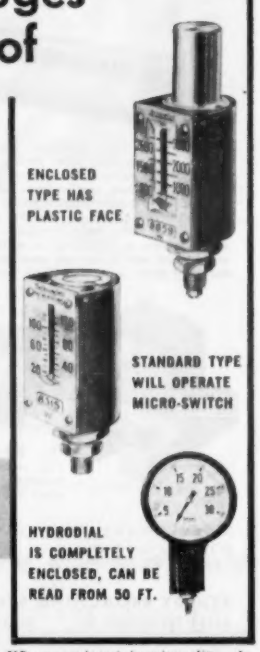
The RAPIDS-STANDARD CO., Inc.
95 Rapistan Building
Grand Rapids 2, Michigan

Representatives in principal cities throughout the world

▲ For more details circle **NED-204 K7** on enclosed inquiry slip ▲

Schrader "workhorse" hydraulic gauges are shockproof

Thousands of these rugged Schrader hydraulic gauges are still accurate after long years of heaviest duty service in countless plants. Simplicity of design, shockproof construction, and interchangeability of parts are features. Even the dial-type line of gauges operates on direct action, using the spring-loaded principle. No special tools or skilled labor needed for maintenance or recalibration. All are available in 9 standard pressure ranges to 5000 psi.

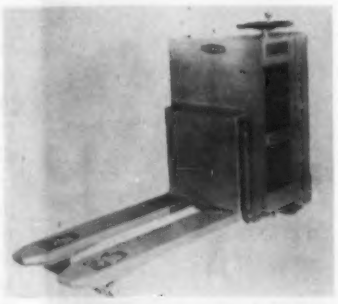


SEND FOR COMPLETE SPECIFICATION LITERATURE ON SCHRADER HYDRAULIC GAUGES

A. SCHRADER'S SON
Division of
Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue
Brooklyn 38, N. Y.

For more details circle NED-205 K7 on enclosed inquiry slip

PALLET TRUCK
rider type has 4000-lb capacity



Tapered fork tip for easy pallet entry and additional grease fittings for easy maintenance of all lever assemblies are improvements incorporated in rider type low lift pallet truck. The 4000-lb capacity unit can right-angle stack 48-in. pallets from a 6-ft wide aisle. It has three travel speeds forward and reverse, with a maximum speed of 4½ mph. Made by **Raymond Corp.**, 41-155 Madison Ave., Greene, N. Y.

For more details circle NED-208 K7 on enclosed inquiry slip

MECHANICAL SEPARATOR
stroke adjusts from ¼ to 1¼ in.

Fast separation of light or heavy parts and castings from casting sand or finishing abrasive is achieved with heavy steel fabricated mechanical separator. Unit has an adjustable stroke ranging from ¼ to 1¼ in. which operates through an eccentric gear to achieve high speed, in addition to small changes with a varidrive expansion pulley. Made by **Metal Finish, Inc.**, 412 Frelinghuysen Ave., Newark 12, N. J.

For more details circle NED-209 K7 on enclosed inquiry slip

ELECTRIC SOLDERING IRON
gets red hot within 90 seconds

Heavy-duty transformer, rated either 110 or 220 v, heats tip of this American Beauty T-30 Super-Hot electric soldering iron to solder-melting heat in 30 seconds, and to red hot within another 60 seconds. Designed for precision production soldering, iron has a changeable tip of Armco ingot iron, brazed to stainless steel tubular casing. Entire element is enclosed in the tip, which can be either diamond or chisel shaped. Element is rated at 30 w. Red plastic handle remains cool at all times. Made by **American Electrical Heater Co.**, 6111 Cass Ave., Detroit 2, Mich.

For more details circle NED-210 K7 on enclosed inquiry slip

WHAT'S NEW at Worthington

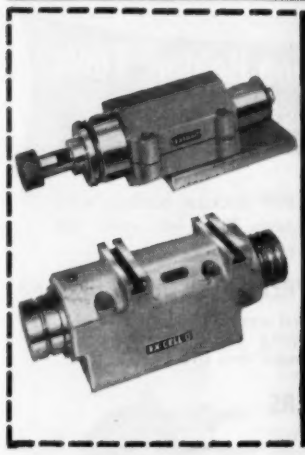
PORTABLE COMPRESSOR
supplies pressures up to 150 psi.

Take compressed air quickly where it's needed with this handy Worthington utility compressor. Every shop should have one for cleaning filters, electrical equipment and inaccessible machinery, spray painting, blowing out clogged lines, power lubrication, tire inflation, and many other every day chores. Available with ⅛ and ⅓ hp electric motor or gasoline engine. Write for free bulletin describing the complete compressor line. Worthington Corporation, Section NED, Harrison, New Jersey.

WORTHINGTON

PC.7.12D

For more details circle NED-211 K7 on enclosed inquiry slip



HUNDREDS OF GRINDING AND BORING SPINDLES FOR SUPERB FINISHES

Ex-Cell-O offers literally hundreds of standard styles of belt-driven and motorized spindles for every imaginable operation. All take heavy cuts without chatter. All use special radial and thrust bearings with the pathways of the balls "developed" to a superbly fine finish. *There's one to suit your operation.*

FREE LITERATURE XLO EX-CELL-O FOR PRECISION

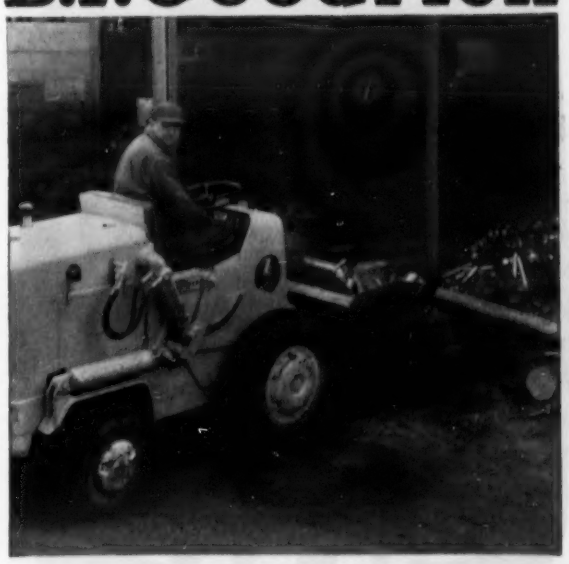
Literature describes most popular spindles in the Ex-Cell-O line—their driving methods, speed ranges, special applications, etc. Ex-Cell-O spindles should be *your* first choice.

EX-CELL-O CORPORATION DETROIT 32, MICHIGAN

57-41

For more details circle NED-206 K7 on enclosed inquiry slip

B.F.Goodrich



New All-Purpose Pneumatic industrial tires cut your operating costs 4 ways!

THE first thing the driver of a materials handling truck notices when you change to B.F.Goodrich All-Purpose Pneumatic industrial tires is the smooth, comfortable ride—the sure, dependable traction! But *you'll* notice reduced operating costs because B.F.Goodrich All-Purpose tires:

1. **Lower machine maintenance by protecting equipment.**
2. **Cut plant maintenance by protecting floors.**
3. **Reduce breakage by cushioning loads.**
4. **Mean more work per salary-dollar by reducing driver fatigue.**

The All-Purpose tread has hundreds of gripping edges that give positive traction in forward or reverse—on all hauling surfaces, indoors and outside. Husky shoulders and a continuous center rib wear slowly and evenly, give the All-Purpose greater stability under heavy loads.

FREE TW Analysis cuts costs up to 50%

The new B.F.Goodrich All-Purpose Pneumatic is just one in the only complete line of money-saving industrial tires for every materials handling job. Picking the right tire for your work is the job of the B.F.Goodrich Tire and Wheel Analysis man. His unbiased recommendations can save you up to 50% on tire costs, up to 20% on maintenance costs. This B.F.Goodrich service is *free*—just mail the coupon. A consulting service is available to manufacturers of materials handling equipment.

Specify B.F.Goodrich tires when ordering new equipment

B.F.Goodrich

B.F.Goodrich Tire Company
A Division of The B.F.Goodrich Company
Department TW-661, Akron 18, Ohio

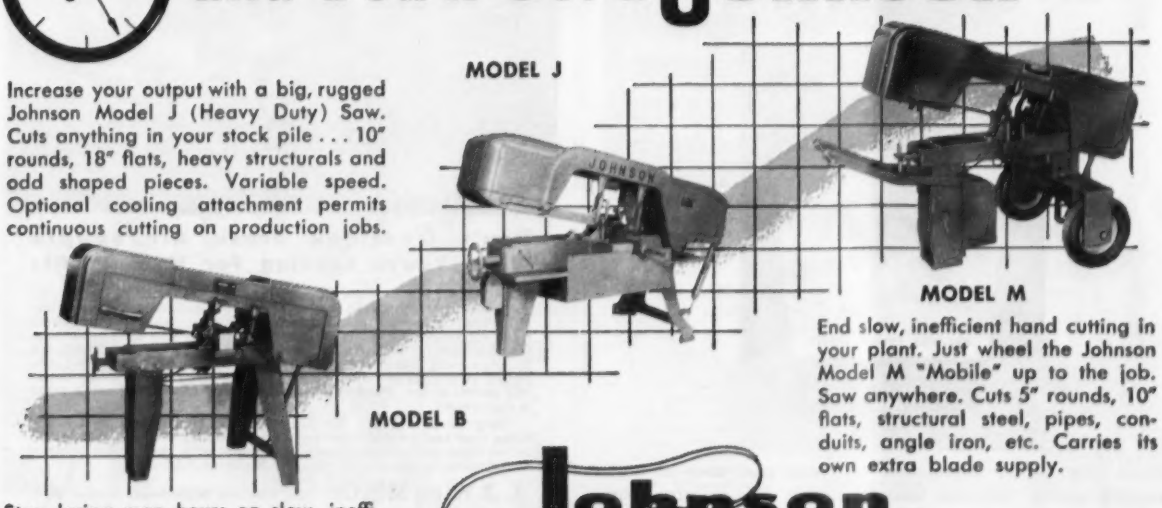
I would like further information on your FREE TW Analysis.

Name_____
Company_____
Street_____
City_____ Zone____ State____

For more details circle NED-212 K7 on enclosed inquiry slip

Time Study your Metal Cutting... and You'll Get a Johnson

Increase your output with a big, rugged Johnson Model J (Heavy Duty) Saw. Cuts anything in your stock pile . . . 10" rounds, 18" flats, heavy structurals and odd shaped pieces. Variable speed. Optional cooling attachment permits continuous cutting on production jobs.



End slow, inefficient hand cutting in your plant. Just wheel the Johnson Model M "Mobile" up to the job. Saw anywhere. Cuts 5" rounds, 10" flats, structural steel, pipes, conduits, angle iron, etc. Carries its own extra blade supply.

Stop losing man hours on slow, inefficient metal cutting machines. Specify a Johnson Model B (wet or dry) Saw for top production. Variable speed. Saws 5" rounds, 10" flats, odd and irregular shapes too. Can be caster equipped for portability.

Johnson MANUFACTURING CORPORATION
Barnes & Taylor Sts. • Albion, Michigan

Eastern Distributor
R. J. R. KELLY CO.
Hale Bldg., 519 Main St.
East Orange, N. J.

Mid-Western Distributor
W. Q. LUNDMARK
75 N. Broadway
Des Plaines, Illinois

Western Distributor
HASTING DISTRIBUTORS
1605 Solano Avenue
Berkeley, California

For more details circle NED-207 K7 on enclosed inquiry slip

CUTS DEBURRING and CHAMFERING COSTS...

PINES TUBE AND ROD END-FINISHING MACHINE

- Fast, Easy to Operate—Clamps, Feeds, and Gauges Depth of Cut in Single Stroke.
- Interchangeable Tool Bits, Holders, Chuck Inserts.
- Combines Inside-Outside Deburring and Facing in Single Operation.
- Compact, Portable—Takes up Small Space.
- Other Models Available for Work up to 5" Diameter.
- Automatic Air-Operated Units and Specials to Suit Higher Production Needs.

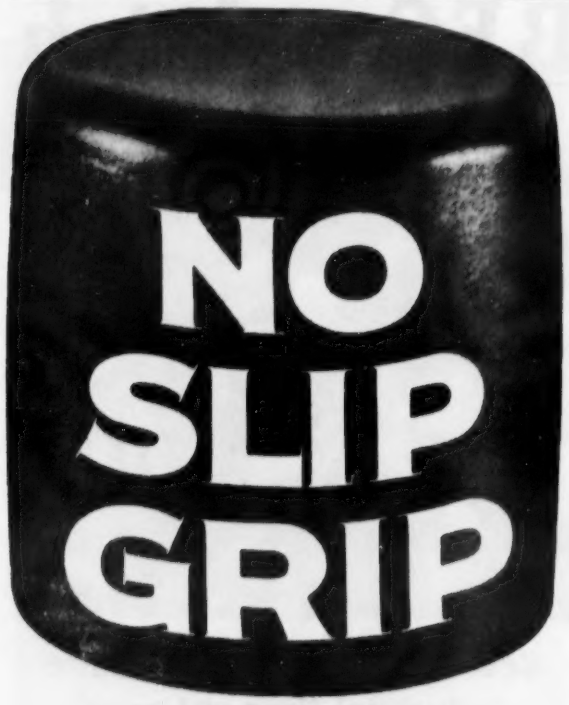
(Above) Model 600 Machine has 8-speed step sheaves (760 to 3920 RPM), pivoting stock stop. Clamps and feeds work to rotating cutters. Capacity up to 2" O.D. Average production: 600-800 tube ends per hour.

WRITE FOR COMPLETE DATA—New Catalog illustrates cost-cutting features, gives production data and complete specifications.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 641 WALNUT • AURORA, ILLINOIS

PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

For more details circle NED-213 K7 on enclosed inquiry slip



S.S.White

PLASTIC PLUGS AND CAPS

No greasy, waxy feel to S.S. WHITE Plastic Plugs and Caps! A no-slip grip every time makes these low-cost protective plugs and caps easy as 1-2-3 to install and remove!

S.S. WHITE Plastic Plugs and Caps help guarantee factory-perfect delivery of your product. Threaded openings and connections get rugged protection against damaged threads, dirt, moisture, or leakage due to rough handling. These plugs and caps are "misapplication-proof" . . . non-shredding . . . won't jar loose or pop out . . . are safe for personnel to handle.

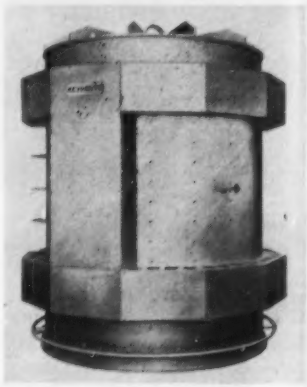
Available for immediate delivery in a wide selection of standard sizes – threaded or plain – for your every requirement. For samples and further information, just drop us a line.

S.S.White

PLASTICS DIVISION
Dept. 7P, 10 East 40th Street, New York 16, N. Y.
Western Office: 1839 West Pico Blvd., Los Angeles 6, Calif.

For more details circle NED-214 K7 on enclosed inquiry slip

VACUUM FURNACES
several types operate up to 2100° F

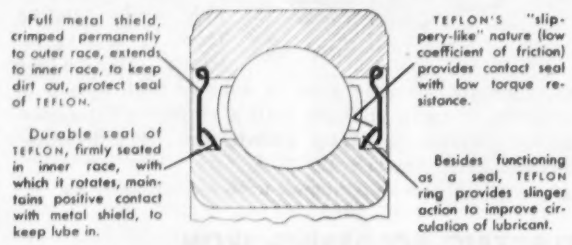


Double-pump pit or bell type standard vacuum furnaces are built to operate at temperatures up to 2100° F. Single - pump vacuum retorts utilized in bell, pit, box, or tube type furnaces in line are for temperatures up to 1600° F. Layers of insulation minimize heat losses and water-cooled flanges form a vacuum seal between retort and furnace shell. Applications include hardening, annealing, brazing, sintering, degassing, and soldering. Vestibule diameters from 18 to 62 in. and heating chamber depths from 36 to 192 in. are offered. Made by **Hevi-Duty Electric Co.**, Box 563, Milwaukee 1, Wis.

For more details circle NED-215 K7 on enclosed inquiry slip

BALL BEARINGS
equipped with Teflon seals

Positive line contact between inner raceway and permanently attached full metal shields of Hoover lubricated-for-life ball bearings is provided by Teflon seals.



They prevent lubrication leakage and act as a slinger to improve its circulation. Dirt and foreign particles are prevented from reaching the working surface by the chemically inert, long wearing, high temperature resistant seals. Teflon-sealed bearings are suited for high speed operation, or where periodic lubrication or servicing is not practical. Made by **Hoover Ball & Bearing Co.**, Ann Arbor, Mich.

For more details circle NED-216 K7 on enclosed inquiry slip

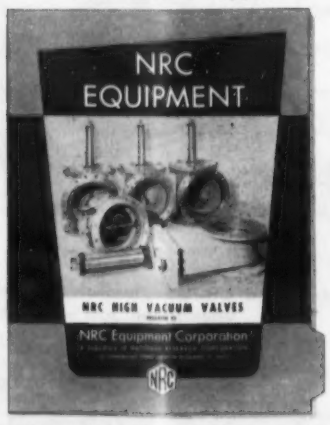
Boring Bar Tooling

DeVlieg Machine Co., DeVlieg Microbore Div.—38-page illustrated catalog No. 58 and latest 20-page price list contains complete information on standard single-tool and two-tool boring bars, boring bar sets, and accessories. Accurate adjustment of Microbore tools is achieved by use of a graduated dial and vernier scale, both of which are calibrated to read on diameter in 0.001-in. increments. These tools are particularly suited for boring, turning, and facing operations.

For more details circle NED-217 K7 on enclosed inquiry slip

New Vacuum Valve Manual Free

Write for Your Copy!



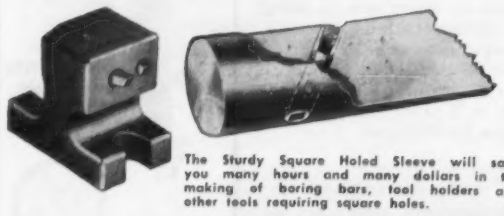
Gives engineering information on types and uses of high vacuum valves. Contains valuable design data on more than 250 valves. Sizes ⅛" to 20" manual and remote operation. Lists wye, globe, angle, slide, ball, air release, throttling and quick connect valves. Write for bulletin No. V2 today!

Department 29-K
NRC Equipment Corporation
A subsidiary of National Research Corp.
160 Charlemont Street, Newton 61, Mass.

For more details circle NED-218 K7 on enclosed inquiry slip

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!

One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.



The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES:
3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

Write for Literature

STURDY BROACHING SERVICE, INC.
23514 TELEGRAPH RD., DETROIT 41, MICH.

For more details circle NED-219 K7 on enclosed inquiry slip

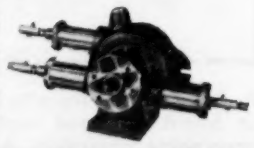
Erickson Precision Holding Tools actually cost you less!

Production records prove that Erickson holding tools speed production . . . lower costs. That's why you'll find Erickson precision tools cost you less!

ERICKSON PRECISION COLLET CHUCKS

Guaranteed accuracy of .0005" with superior gripping power. More holes per grind. Longer tool life.

ERICKSON SPEED INDEXERS



Up to 500 indexes. Single or continuous cycle operation. Accurate within 2 minutes of a degree. Adjustable self-contained shock control unit.

ERICKSON EXPANDING MANDRELS

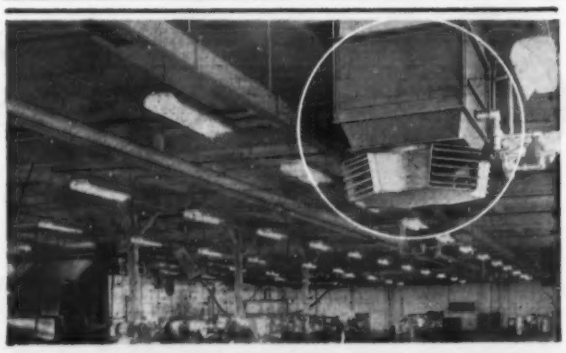
Accurate to .0005". Instantaneous self-release, greater grip and automatic alignment speed part loading. Air, hydraulic or manual operation.

AA-247

ERICKSON TOOL COMPANY
2307-A Hamilton Avenue • Cleveland 14, Ohio

COLLET CHUCKS • FLOATING HOLDERS • TAP CHUCKS • TAP HOLDERS • AIR OPERATED CHUCKS • EXPANDING MANDRELS • SPECIAL HOLDING FIXTURES

For more details circle NED-220 K7 on enclosed inquiry slip



Don't Overlook Fresh Air Supply When You're Looking For More Profits

PRODUCTION suffers when make-up air is not provided to replace that exhausted during process operations, paint spraying, etc. Now the simple and dependable way to deliver an adequate fresh air supply to the plant area requiring it and always at comfortable room temperatures is through Wing "FAS" (Fresh Air Supply) Unit Heaters. Exhaust fans then can operate at full efficiency. Processes are more closely controllable. Workers feel better and work better. Production is increased. More uniform quality is maintained.

Wing "FAS" (Fresh Air Supply) Unit Heaters are "package" units that require no elaborate duct work and thereby hold installation costs down. Operation is automatic with thermostat controls maintaining temperatures. *Ask for Bulletin FAS-1.*

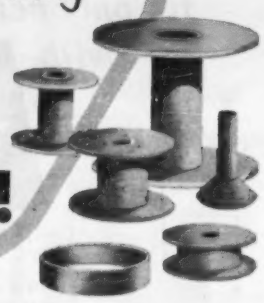
L. J. Wing Mfg. Co. 165 Vreeland Mills Road · Linden · N. J.
DIVISION OF AERO SUPPLY MFG. CO. INC. In Europe: WANSOR, Haren Nord, Brussels, Belgium

Wing
FRESH AIR SUPPLY HEATERS

FANS • UNIT HEATERS • DRAFT INDUCERS • BLOWERS • TURBINES

For more details circle NED-221 K7 on enclosed inquiry slip

There are many uses for SONOCO PAPER SPOOLS!



Sonoco paper spools have been the answer to many a need . . . in production, packaging and shipping . . . for numerous companies in many industries.

For example, they're perfect as self-dispensing carriers for tapes, rope, wire and cord.

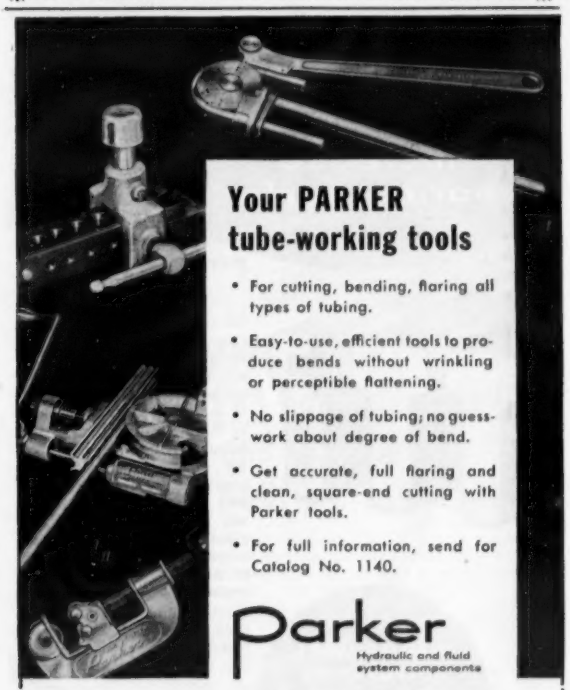
Sonoco paper spools can be made to meet your exact requirements, or you can choose from a wide range of standard sizes.

Sonoco also makes all kinds of paper products for industrial use such as cones, tubes, cores and molded shapes.

Ask Sonoco for information, samples and prices!

SONOCO PRODUCTS COMPANY
2763 HARTSVILLE, S. C.
"PLANTS FROM COAST TO COAST"

For more details circle NED-222 K7 on enclosed inquiry slip



Your PARKER tube-working tools

- For cutting, bending, flaring all types of tubing.
- Easy-to-use, efficient tools to produce bends without wrinkling or perceptible flattening.
- No slippage of tubing; no guesswork about degree of bend.
- Get accurate, full flaring and clean, square-end cutting with Parker tools.
- For full information, send for Catalog No. 1140.

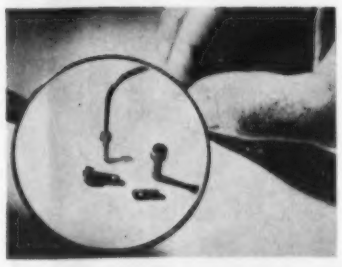
Parker
Hydraulic and fluid system components

Order from your Parker Distributor, or Tube & Hose Fittings Division, Section 433-Y, The Parker Appliance Co., 17325 Euclid Ave., Cleveland 12, Ohio

For more details circle NED-223 K7 on enclosed inquiry slip

For more details circle NED-224 K7 on enclosed inquiry slip

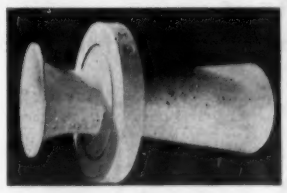
MICROSIZE SETSCREWS
now have nylon self-locking insert



Unbrako socket-head cap and socket setscrews in No. 0 to 3 and to No. 4 micro sizes are now available with the Nylok nylon self-locking insert. Fasteners are usable in electrical and electronic equipment, industrial and laboratory instruments, and other precision assemblies where vibration is a problem. The tiny nylon pellet seated in the threaded portion of the fastener exerts outward pressure which forces mating threads together tightly. Insert resiliency is unaffected by −70 to 300° F range. Fasteners are made to Class 3A thread fit and offered in alloy or stainless steel by **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

For more details circle NED-225 K7 on enclosed inquiry slip

PLASTIC VENTURI NOZZLE
for metering corrosive fluids

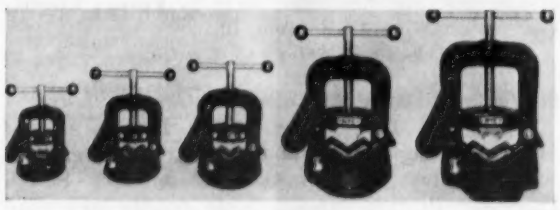


Fabricated of Fiberglas-reinforced polyester plastic, this insert type venturi flow nozzle is suited for metering many corrosive fluids, including nonoxidizing acids, corrosive salts, weak alkalies, some alcohols, formaldehyde, and refinery crudes. Modified designs will handle slurries. Five sizes from 2 to 24 in. are suitable for up to 150 psi and 250° F on most applications. Uncalibrated accuracy is within ±1 per cent of actual flow rate. Made by **Builders-Providence, Inc.**, 425 Harris Ave., Providence 1, R. I.

For more details circle NED-226 K7 on enclosed inquiry slip

PIPE VISES
five heavy duty, self-locking models

Replaceable forged steel jaws that permit working on plated pipe without marring are included in line of five improved heavy duty, self-locking pipe vises.



Each has a built-in pipe rest and bender as part of the base. Capacities range from ⅛ to 2 in. up to ⅛ to 4½ in. Made by **Nye Tool Co.**, Dept. NED, 4120 W. Fullerton Ave., Chicago 39, Ill.

For more details circle NED-227 K7 on enclosed inquiry slip

For more details circle NED-228 K7 on enclosed inquiry slip

MONOBLOC ROTARY PUMP
gives you 28 ways to hook up piping

It's easy to fit this new Worthington Rotary Monobloc pump into existing space because you have a choice of many different piping arrangements. Dual suction and discharge opening, reversible pump direction and four flange positions on the motor will help you simplify layouts – saving time and materials. Like all Worthington Monoblocs, the new rotary eliminates alignment problems, is less expensive than separate pump, motor and baseplate. Write for free booklet. Worthington Corporation, Section NED, Harrison, N. J.

WORTHINGTON

For more details circle NED-229 K7 on enclosed inquiry slip

GENERAL

Wide-Base Pneumatics Save You COSTS at Every Turn!

When it comes to saving time, money and labor, General Wide-Base Pneumatics are the best buy you can make. Featuring high flotation for easier rolling, these great work-horse tires cushion equipment and loads, save high cost floors and floor surfaces, give you more load capacity at all speeds. What's more, General's complete line gives you the exact design for every purpose.

Available separately or in assemblies of tires, tubes and wheels. Size O. D. 8" to 35"—200 to 7890 lbs. capacity for low or high speeds.

Rigid

CASTER FORKS

Engineered to carry heavier loads without adding dead weight to equipment, these wide-base caster forks are available in identical pairs in a wide range of sizes.

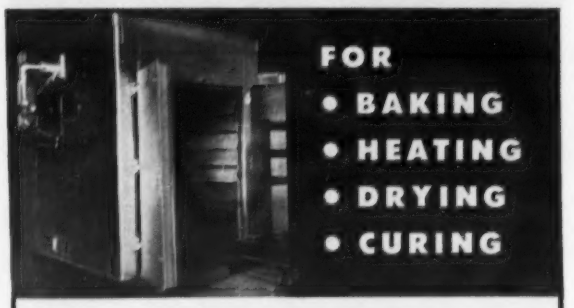
Swivel

THE GENERAL TIRE

SEND FOR CATALOG, DEPT. 4.
THE GENERAL TIRE & RUBBER CO.
AKRON, OHIO

For more details circle NED-230 K7 on enclosed inquiry slip

NOW! A TRULY VERSATILE STANDARD KILN TYPE OVEN



MOCO has incorporated many custom, money-saving features into this standard oven — using gas fuels or electricity.

They offer *maximum temperature uniformity* and *complete safety equipment* at amazingly low initial cost. You can depend fully on a MOCO-engineered product!

MORE INFORMATION?
If you are in the market for a standard oven, be sure and send for this informative brochure.

MICHIGAN OVEN COMPANY
419 Brainard, Detroit 1, Mich.

MOCO

For more details circle NED-231 K7 on enclosed inquiry slip

safe climb... on a 60° grade!

WITH ALCOA ABRASIVE TREAD PLATE

You *could* do it . . . on Alcoa Abrasive Tread Plate!

Here's a surface with the grip and bite of a grindstone . . . for it's made of the same aluminum oxide particles used in grindstones.

These abrasive particles are rolled right into aluminum — strong, light, rustproof, maintenance-free plate. It stays slip-proof even when wet, oily or greasy. Since the abrasive is rolled in, its slip-proof qualities are more than surface deep!

Use this safer abrasive tread plate wherever hazardous conditions exist. Your safety committee knows where they are.

Just remember that each year 20,000 workers are killed and thousands injured by falls due to slipping. Preventing just a single such accident in your plant makes Alcoa® Abrasive Tread Plate the best insurance you can buy!

Check the coupon for a four-inch sample, ask for complete details. Aluminum Company of America, 1668-G Alcoa Bldg., Pittsburgh 19, Pa.

Your Guide to the Best in Aluminum Values

ALCOA ALUMINUM

THE ALCOA HOUR— Television's Finest Live Drama, Alternate Sunday Evenings

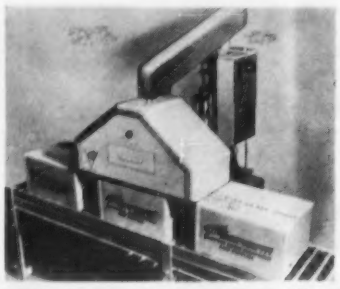
Aluminum Company of America
1668-K Alcoa Bldg., Pittsburgh 19, Pa.

Please send literature and four-inch sample of abrasive tread plate.

Name and Title .....
Company .....
Use Being Considered .....
Address .....
City and State .....

For more details circle NED-232 K7 on enclosed inquiry slip

CARTON MARKING MACHINE
adjusts to various size cartons



Assembly line marking of various size packages, without stopping for adjustment, is possible with the Mark V Volu-Mark marking machine. In operation, unit adjusts itself for carton heights up to 21 in. and for lengths from 8 to 36 in. It counts, positions, and marks each carton firmly without damaging fragile contents, then shuts itself off after predetermined number of units has been marked. Speed can be regulated to that of any packaging or sealing equipment up to 30 units per minute. Machine will imprint various size letter stencil, machine, or hand cut trademark designs. Safety bar and panic switch allows immediate stop or quick reverse. Made by **Ideal Stencil Machine Co.**, Dept. NED, 134 Iowa Ave., Belleville, Ill.

For more details circle NED-233 K7 on enclosed inquiry slip

PUSHBUTTON STATIONS
two and three buttons are standard

Base mounted control mechanism and front accessible wiring terminals are featured by series BA standard duty pushbutton stations. Reversible formed steel base includes knockout and pipe connection which allows wiring from either end or straight through. Controls can have one normally-open contact, one normally-closed contact, or one normally-open and one normally-closed contact on each button. Two or three buttons are standard. Wrap-around cover is molded of glass fiber reinforced alkyd. Contacts are rated 3, 1.5, 0.75, and 0.6 amp at 110, 220, 440-480, and 550-600 v ac, respectively. Direct current ratings are 1.1, 0.55, and 0.2 amp at respective voltages of 115, 230, and 550-600. Made by **Furnas Electric Co.**, 1009 McKee St., Batavia, Ill.

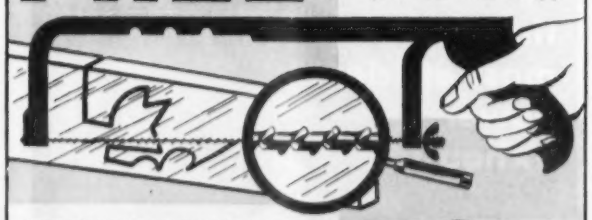
For more details circle NED-234 K7 on enclosed inquiry slip

Producing Printed Circuits

Dry Screen Process Inc.—Small 12-page booklet deals with "Superior Printed Circuitry at High Production Rates Through the Use of Dry Screen Process." In most cases, process assures high quality or reliability, ample production volume and low unit cost.

For more details circle NED-235 K7 on enclosed inquiry slip

FREE TO INDUSTRIAL USERS... (Limited Time Only)



Demonstrate for yourself the big advantage of now being able to saw up or down, left or right, or in circles with Tyler SPYRAL Hacksaw, Coping Saw and Bandsaw Blades.

Saw any material including metal, wood, plastic, tubing, etc. without chipping or tearing. Blades are of rugged spring tempered steel, hardened for maximum cutting life. SPYRAL Bandsaw Guides & Blades available for Delta 14" Bandsaws and all DO-ALL machines.

Since your FREE blade will be distributed by your industrial supplier, it is imperative that you include his name in coupon.

Tyler SPYRAL HACKSAW BLADE!

MAIL COUPON FOR FREE SAMPLE

TYLER MANUFACTURING CO., INC. Dept. D-10
1005 W. Arbor Vitae Ave., Inglewood 7, Calif.
Please send FREE sample SPYRAL HACKSAW BLADE and full information about all Tyler Products.

Name _____
Company's Name _____
Address _____
City & State _____
My Industrial Supplier is _____

For more details circle NED-236 K7 on enclosed inquiry slip

LOW-COST HUMIDITY CONTROL for only pennies a day with Bahnson UNIT HUMIDIFIERS

TYPE E

Now any size plant can afford this inexpensive humidification and insure profits

Guaranteed water or steam units have low first cost, low operating cost. Can be installed singly or in groups. Require no floor space, little maintenance. High capacity. Automatic control.

N-5

FREE! ILLUSTRATED BOOKLET
Catalog details full line.
Write for it today!

Bahnson Company
WINSTON-SALEM, N. C.

For more details circle NED-237 K7 on enclosed inquiry slip

screen has special profile to increase wearing surface

MIGH-TEE KLEENSLOT
G187 .437 high—.187 wide
GB187 .500 high—.187 wide

Designed for heavy duty applications where precision is essential. Openings larger than ordinarily considered economical and openings as small as ⅛ m.m. are easily maintained by this screen.

Unique assembly (patent applied for) contributes towards non-blinding, non-clogging performance. The Migh-Tee Kleenslot is also adaptable to vibrator applications and can easily be interchanged with other types of Kleenslot Screens without mechanical changes.

Constructed of high abrasion resistant stainless steel. Furnished in guard bars and special shapes or designs.

WEDGE-WIRE CORPORATION
Wellington, Ohio

Write today
Our engineering staff will promptly assist you in solving your screening problems. Be sure to include specifications.

For more details circle NED-238 K7 on enclosed inquiry slip

NEW HANDBOOK OF SMALL TOOLS AND ACCESSORIES

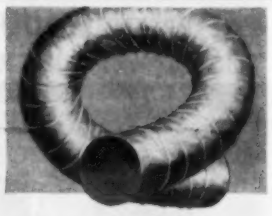
Here is our new, enlarged catalog with 1375 different items listed and described — more than 230 illustrations. Such essential tools as cutters, vises, arbors, rotary tables, chucks, collets, master copy type and other tool room and production line necessities are all within the covers of this 52-page book. Yours without obligation on letterhead request.

GORTON

GEORGE GORTON MACHINE CO.
1910 Racine St. Racine, Wis.

For more details circle NED-239 K7 on enclosed inquiry slip

facts about Spiratube®



that will help you solve your ducting problems

What is Spiratube?
A flexible, lightweight duct made of continuous helical coils of spring steel reinforced with overlapping plies of tough, multicoated fabric.

What are its applications?
It is used for removing air, gases, liquids and many solids at low pressure.

How flexible is Spiratube?
It will take bends up to 180° without buckling.

How much abuse can it take?
Plenty. Flex tests run to 280,000 times without apparent wear.

Are there different types of Spiratube?
Yes, five . . . in a variety of covers and in sizes from 3" to 30" I.D.

What about installation?
Sections of Spiratube can be linked together or detached in a matter of seconds without the use of tools. No elbows or fittings are required.

How can I make sure that Spiratube will solve my problems?
Write, outlining your requirements, to Dept. 20.

Sold through industrial distributors from coast to coast

Flexible Tubing CORPORATION
GUILFORD, CONNECTICUT • LOS ANGELES 64, CALIFORNIA

For more details circle NED-240 K7 on enclosed inquiry slip

Permanently End Condensation Drip, Rust and Corrosion with NoDrip Plastic Coating!

Here is the inexpensive, easy way to solve your condensation problem once and for all. NoDrip plastic coating acts immediately to insulate and protect tanks, pipes, walls, ceilings, air ducts and other metal equipment against condensation drip, rust and corrosion. NoDrip can be applied by anyone without special experience with brush, trowel or spray. NoDrip is also resistant to acid, alkali and brine . . . protects concrete, brick, plaster, tile, wood or composition surfaces.

FREE

32-PAGE NoDrip DATA HANDBOOK Complete with photographs, charts and technical information to help solve your condensation problem. Write today!

Available at leading plumbing and mill supply houses
J. W. MORTELL COMPANY 526 Burch St., Kankakee, Ill.

For more details circle NED-241 K7 on enclosed inquiry slip

JOY BELT CONVEYOR IDLER

eliminates ruptured duck

If your conveyor belting has been breaking and wearing out just at the gap between idler rolls . . . like this . . .

we have a solution—a *new* type of idler called the Joy Limberoller . . . a flexible steel cable suspended between two bearings. Neoprene discs are molded to the cable forming a single roll which turns on its own axis. This idler supports the belt throughout its entire width . . . increases belt life 20% and more. ***Joy Manufacturing Company, Oliver Building, Pittsburgh, Pa.***

WSW L 6462-178

Write for free bulletin 178-54

JOY . . . EQUIPMENT FOR ALL INDUSTRY

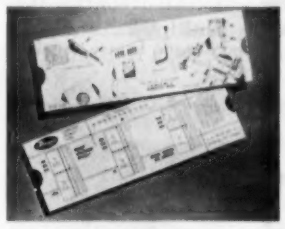
For more details circle NED-242 K7 on enclosed inquiry slip

BRASS NEEDLE VALVES for up to 600 psi air, liquid uses

Brass needle valves are suitable for air and liquid applications up to 600 psi and can be used for shutoff or throttling. Machined entirely from brass bar stock, they are only 1⅝ in. long. Gasket between bonnet and body is eliminated by means of a taper metal-to-metal seat. Valves are offered in all combinations of ⅛ and ¼-in. male and female pipe ports and in ⅜-in. male pipe ports. Made by **Generant Engineering Co.,** 256 S. 20th St., Newark 3, N. J.

For more details circle NED-243 K7 on enclosed inquiry slip

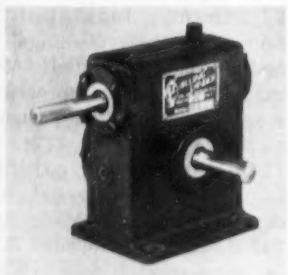
COMBUSTION CALCULATOR determines furnace efficiency



Overall efficiency of a furnace or boiler can be obtained with one setting on this slide-rule calculator type combustion efficiency chart. Scale is first set at stack temperature at which furnace is operating. The "window" for the proper fuel classification (coal, oil, LP-gas, 505, 830, 1050 Btu gas) is then selected. Opposite the corresponding CO_2 content is then shown the exact percentage of combustion efficiency. On reverse side, draft, CO_2 content, stack temperature, and smoke are simultaneously plotted to show ideal conditions. Chart is made of plastic and is offered free by **F. W. Dwyer Mfg. Co.,** Dept. NED, Box 373, Michigan City, Ind.

For more details circle NED-244 K7 on enclosed inquiry slip

SPEED REDUCERS input ratings are 1/10 to ¾ hp

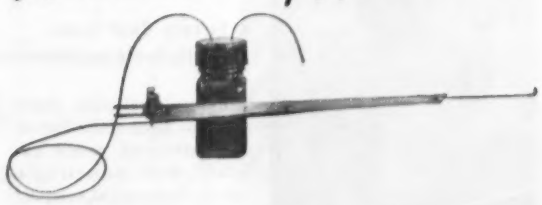


Choice of input shaft arrangements afforded by series CO and CU speed reducers makes possible installation with greater freedom of motor-reducer mounting setup. Model CO units, offered in two sizes, are available with worm mounted over the worm wheel with a top-entering input shaft. The CU series units feature input worm shaft located under the worm gear. Both units in the 15 and 20 sizes have ball bearings throughout. All shafts are fitted with synthetic oil seals. Right or left-hand output can be specified. Input ratings range from 1/10 to ¾ hp. Made by **Alling-Lander Co.,** Dept. C, Sodus, N. Y.

For more details circle NED-245 K7 on enclosed inquiry slip

ARCCO CANNON *NEVER-DRY* PEN

Writes for Months



REPLACES OTHER MAKES • USES REGULAR INKS

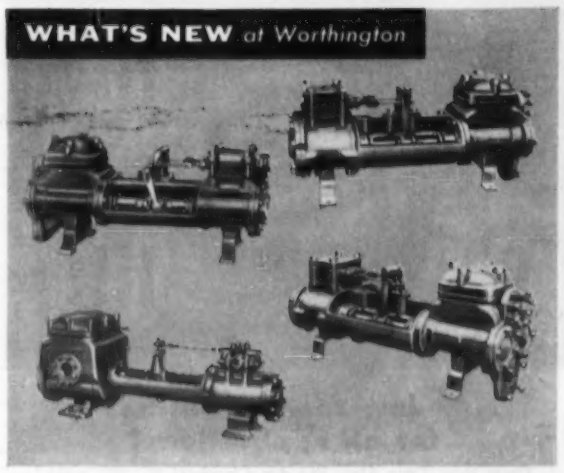
Regardless of pulsations or other causes of ink failures this new Never-Dry Pen will make clean and complete records. Ink supply lasts for several months without refilling reservoir. Capillary tube from ink bottle placed in instrument case feeds pen with continuous flow. Closed system sealed from atmosphere prevents clogging and dirt accumulation.

Weight of pen is constant at all times thus insuring extreme accuracy. No slopping or dripping. Stainless steel construction—no corrosion. When ordering, specify make and type of recording instrument.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

$6.00 each Net
Send for quantity prices

For more details circle NED-246 K7 on enclosed inquiry slip



STEAM PUMPS FROM STOCK

Save weeks by selecting from standard types

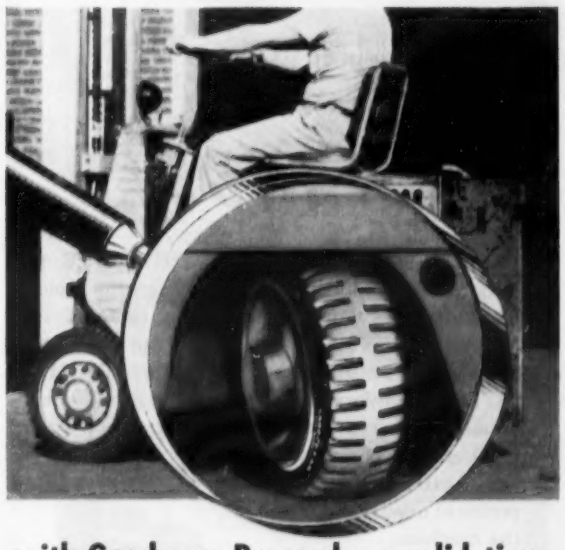
Order your next steam pump from Worthington and you'll have a big selection of standard pumps available from stock. You'll save time, get a unit that's backed by a large stock of spare parts. To cut maintenance costs all standard pumps have renewable cylinder liners. Pumps shown above are of the valve plate type. Write for free literature. Worthington Corporation, Section NED, Harrison, New Jersey.

WORTHINGTON

PC.7-12A

For more details circle NED-247 K7 on enclosed inquiry slip

Maintenance Savings could start right here



with Goodyear Pressed-on solid tires

EVERYBODY KNOWS that the right tires can be mighty important in reducing equipment down time. The rugged tires you see here are designed to give you the maximum service at lowest possible cost in a wide variety of operations.

To insure peak performance, two special tread stocks have been perfected by Goodyear:

(1) Universal Compound insures long wear, maximum cut-resistance. It is standard for conventional solid tires in all sizes.

(2) Power Saver Compound combines high cut-resistance with lowest rolling resistance. Standard for all sizes of Xtra Cushion Solids.

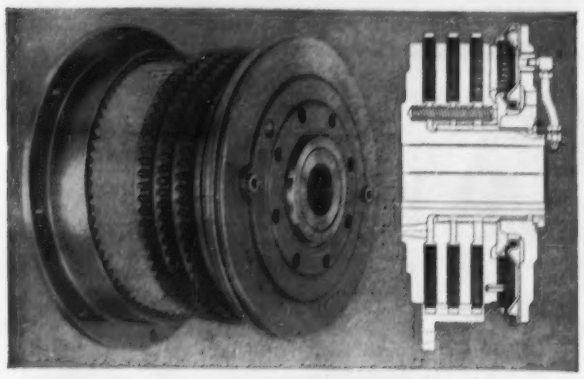
If you have a problem involving industrial tires, why not talk it over with your Goodyear dealer? He can help you by fitting the right tire to the truck – and the job. Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Look for this sign; there's a Goodyear dealer near you.

Use the Right Tire for the Job—Buy and Specify

GOODYEAR INDUSTRIAL TIRES

For more details circle NED-248 K7 on enclosed inquiry slip



New low-cost air clutches — for *all* applications!

Three new Twin Disc PO Air Clutches! 8", 10", 11½" sizes! Triple-plate, double-plate or single-plate construction! Cost up to 40% less than comparable makes! Design features exclusive cartridge-type diaphragm of long-lasting neoprene reinforced with nylon . . . permits uniform contact—always . . . eliminates leakage! Self-compensating for wear . . . no adjustments required — ever! Narrow width permits replacement of band and drum clutches. Twin Disc now offers PO Air Clutches from 8" to 36", torque capacities to 126,600 lb.-ft.

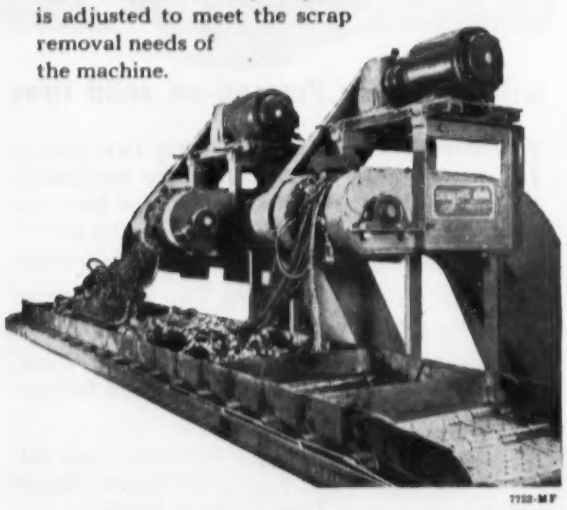
TWIN DISC
Friction Clutches and Fluid Drives

TWIN DISC CLUTCH CO. • Racine, Wisconsin

For more details circle NED-292 K7 on enclosed inquiry slip

LOOK... NO HANDS!

That's right! The May-Fran CHIP-TOTE permits the continuous operation of machine tools by eliminating down-time for scrap removal . . . skilled workers stay on the job . . . production increases by as much as 20%! Versatile CHIP-TOTE conveyors are available in a wide range of sizes to serve practically any type or size of machine tool. Conveyor speed is adjusted to meet the scrap removal needs of the machine.



7722-MF

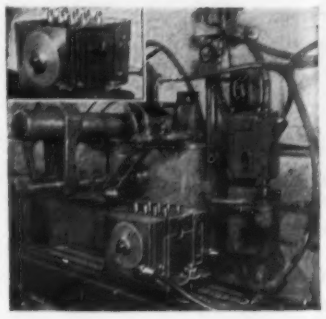
REMOVE CHIPS, TURNINGS AND BORINGS CONTINUOUSLY AND AUTOMATICALLY WITH A MAY-FRAN CHIP-TOTE

Write today for your copy of Bulletin MF-640.

MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Rd. Cleveland 12, Ohio

For more details circle NED-293 K7 on enclosed inquiry slip

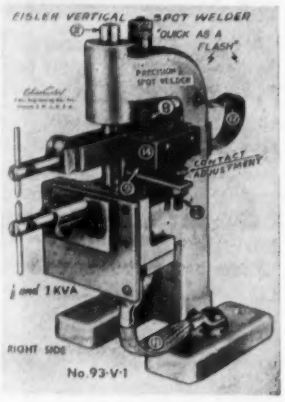
MULTIPIECE MILLING FIXTURE
holds round, hex, or irregular parts



As many as eight pieces can be machined at one time by using this air-operated hydraulic multiple milling fixture. Split bushing type collets accommodate round, hex, square, or irregular shapes. Self-equalizing jaws compensate for variations in size of the various workpieces. Work is held securely regardless of variations as much as 0.01 in. in any size from 1 in. down to 1/16 in. Hardened or soft collets are readily made from any 1-in. diameter material. Booster develops holding force up to 8400 lb with 100-psi air line pressure. Adjustable stops control work height. Adaptable for automated control, fixture is also suited for use in multiples. Made by **Multi Engineering Co.,** Dept. NED, 1829 N. 32nd Ave., Melrose Park, Ill.

For more details circle NED-294 K7 on enclosed inquiry slip

SPOT WELDER
vertical bench type unit



All weldable metals and alloys from 0.0002 in. thick to capacity can be welded on this vertical press type spot welder, depending on the nature of the weld. The 9-in. high unit is also adaptable for wire butt welding. Welder alone can be supplied, or it is offered with ¼, ½, 1, and 2-kva transformer, with or without timer. Pressure adjustment, contact adjustment, insulated face plate, ball bushings, and cast aluminum main body are incorporated. Welder has ground vertical main shaft (2), compression spring (8), stop adjustment screw (9), front electrode connector (11), back electrode connector (12), contactor make-and-break (14), and contactor adjustment screw (15). Welder is usually foot-operated, but air or motorized units can be supplied. Made by **Eisler Engineering Co.,** 753 S. 13th St., Newark 3, N. J.

For more details circle NED-295 K7 on enclosed inquiry slip

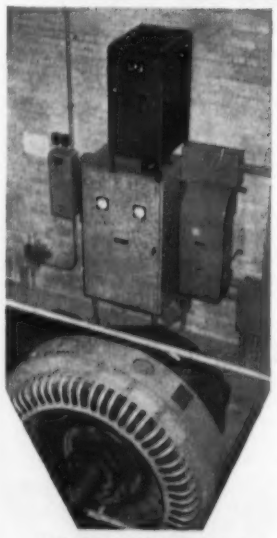
Contract Facilities Available

Verson Allsteel Press Co.—Facilities for contract welding, machining, gear cutting, and press rebuilding are described in illustrated 32-page booklet F-57. Types of equipment available for these services, their capacities, and capabilities are covered.

For more details circle NED-296 K7 on enclosed inquiry slip

THER SELENIUM RECTIFIER

USED TO EXCITE LARGE SYNCHRONOUS MOTOR



Model T-3½-451VNS all steel cabinet. 0 to 150 volts d. c., 3½ Kw, continuous duty.

- **to save floor space**
- **to eliminate maintenance**

In this installation there was no floor space for an old-fashioned rotary exciter. Wall-mounting a quiet, economical, *compact* Ther d. c. power supply solved this problem.

Can dry disc rectifiers solve your problem?

When dependability counts . . . specify **THER** *d. c. power supplies.*

Write for bulletin 1712, "3 Phase Selenium Industrial Rectifiers"

THER ELECTRIC & MACHINE WORKS
Established 1915
15A SOUTH JEFFERSON STREET • CHICAGO 6, ILLINOIS

For more details circle NED-297 K7 on enclosed inquiry slip

"WE PREFER CLAUSING VERTICAL MILLS FOR ALL WORK WITHIN THEIR CAPACITIES!"

The new CLAUSING VERTICAL MILLER is the most accurate machine of its type. The spindle head can be swiveled in a vertical plane and set at any angle, and the turret rotated in a horizontal plane making it possible to mill, drill, bore, ream and shape at all angles with one work set-up.

"Our men prefer Clausing vertical mills for all work within their ½" cutter capacity. They're certainly as accurate as larger machines, and they are far more efficient . . . work set-up is easier, they're easier to get around, and they're far more sensitive."

The Progressive Machine and Tool Company

CONDENSED SPECIFICATIONS

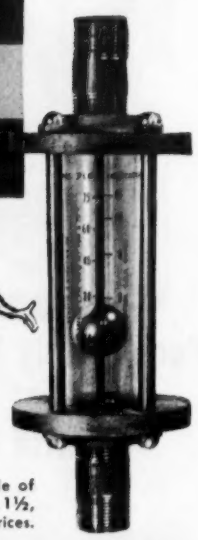
Size of Table	6" x 24"
Longitudinal Table Travel	15"
Transverse Table Travel	5"
Vertical Table Travel	11⅝"
Maximum Distance Spindle to Column	8¾"
Quill Travel	3"

Write For Literature

CLAUSING DIVISION ATLAS PRESS COMPANY
10-113 N. Pitcher St., Kalamazoo, Michigan

For more details circle NED-298 K7 on enclosed inquiry slip

SK FLOW INDICATOR PROVIDES DUAL SCALE FOR WATER OR AIR



Now, you can obtain approximate measurement of *water flow in gpm* and *air flow in cfm* with SK's Fig. 18123 Ball Flow Indicator.

Note the dual scale, for water and air, on the Flow Indicator in the illustration.

This indicator uses a ball to indicate flow in a pipe line. The position of the ball, in relation to the water or air scale graduations gives approximate indication of fluid rate-of-flow.

SK Fig. 18123 Ball Flow Indicators, made of bronze, are carried in stock in ¼, ½, ¾, 1, 1½, and 2 in. pipe connection sizes. Write for prices.

Schutte and Koerting COMPANY
MANUFACTURING ENGINEERS
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.

Jet Apparatus: Ask for Condensed Bulletin J-1.	Rotameters & Flow Indicators: Ask for Condensed Bulletin 18-R4.	Valves: Ask for Condensed Bulletin V-1.	Heat Transfer Apparatus: Ask for Condensed Bulletin HT-1.	Gear Pumps: Ask for Bulletin 17-A.

For more details circle NED-299 K7 on enclosed inquiry slip

MAKE YOUR OWN

Storage & Pallet Racks • Adjustable & Frame Scaffolds • Portable Docks • Rolling Steps • Rolling & Stacking Pallets • Shelter & Work Bench Frames, etc.

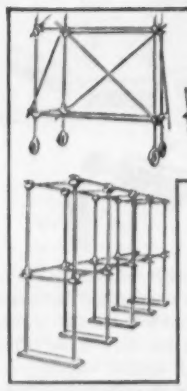
with STRONG, MALLEABLE, TOUGH

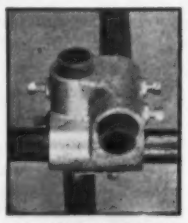
AMIDON FITTINGS

(and standard 1-inch pipe)

send for free literature or

TRIAL ORDER





Assembly and dismantling is simple and easy. No threading necessary; pipe is secured by set-screws. TRIAL ORDER: Send for 25 Amidon fittings, try them, if not satisfied return them for credit and we will buy pipe used.

YOU MUST BE SATISFIED!

AMIDON ENGINEERING CO.
ELYRIA 20, OHIO

For more details circle NED-300 K7 on enclosed inquiry slip

ASSURED BEARING PERFORMANCE
ROUND THE CLOCK!

WRITE TODAY FOR BULLETIN #454

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS

For more details circle NED-301 K7 on enclosed inquiry slip

REPUBLIC
VALVES
INDUSTRIAL • CHEMICAL • AIRCRAFT

What! PLUG VALVES THAT TURN EASILY AT 65° BELOW!! WITH NO LUBRICANT!!!

Up to 250°, down to −65° F, is the range of Republic's LO-TEMP selector valve. Easy turning, positive sealing, at pressures to 100 psi. Tapered TEFLON plug requires no lubricant, and is not affected by acids or alkalis.

Aluminum body for aircraft and general use, stainless steel for chemical, food, and dairy industries. Angle, 2, 3, 4-way, with or without drain, flanged for panel mounting.

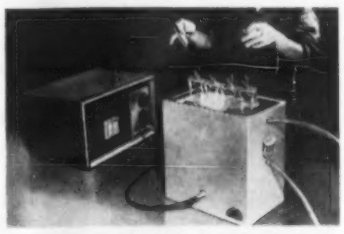
Write for Bulletin No. 754. Distributors in principal cities from coast to coast.

134

RM REPUBLIC MANUFACTURING CO.
15655 BROOKPARK ROAD • CLEVELAND 11, OHIO

For more details circle NED-302 K7 on enclosed inquiry slip

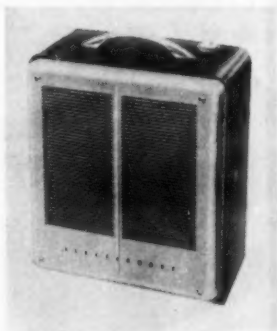
ULTRASONIC PROCESSING TANKS
available in 5 and 8-gal capacities



Attachment of reinforced transducer elements to Sonitanks by riveting results in durability and efficiency in ultrasonic processing operations. The 5 and 8-gal tanks operate at a resonant frequency of 20 kc per second. Stainless steel treatment chambers have provision for recirculation and filtering of the liquid medium. Ultrasonic generators used with the 5 and 8-gal tanks are 400-w model G4520 and 700-w model GU 720, repectively. Made by **General Ultrasonics Co.**, Dept. TD, 67 Mulberry St., Hartford 3, Conn.

For more details circle NED-304 K7 on enclosed inquiry slip

PORTABLE ELECTRIC HEATER
in 3200, 3600, and 4800-w capacities

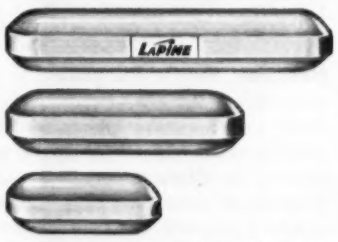


Large rooms can be safely and quickly heated by this portable electric heater, available in 3200, 3600, and 4800-w capacities. Built-in thermostat controls room temperature automatically. Heater has 6-ft cord and plug, a carrying handle, and measures 19 x 15⅝ x 9 in. Sealed cast aluminum heating element minimizes danger of fire, shock or burn. Unit is equipped with safety switch which prevents overheating, and has a quiet, heavy-duty motor. Made by **Commercial Controls Corp.**, Electromode Div., Dept. N, 1 Leighton Ave., Rochester 2, N. Y.

For more details circle NED-305 K7 on enclosed inquiry slip

MAGNETIC STIRRING BARS
completely encapsulated in Teflon

Encapsulation of Alnico V magnetic stirring bars in Teflon obviates contamination of solutions and prevents corrosion of bars. Lanco Lozenge Magnets are molded in Teflon powder, then sintered to produce a homogeneous, uniformly thick capsule. Each bar is electrically tested to detect possible pin holes, fractures, or weak spots. Made by **Arthur S. LaPine & Co.**, Editorial Dept., 6001 S. Knox Ave., Chicago 29, Ill.



For more details circle NED-306 K7 on enclosed inquiry slip

WHAT'S NEW at Worthington

BALANCED ANGLE COMPRESSOR
now available in larger—15 to 20 hp—sizes

Now you can get all the advantages of modern design in the larger compressor sizes. Smoother running, a Worthington "balanced angle" compressor needs no special foundation. Its exposed cylinders increase cooling efficiency, save power dollars and give better compressor performance in high ambient temperatures. For low-cost replacement, cylinders are readily removable. Balanced angle compressors are available base or tank mounted or as a bare compressor. Write for free literature. Worthington Corporation, Section NED, Harrison, New Jersey.

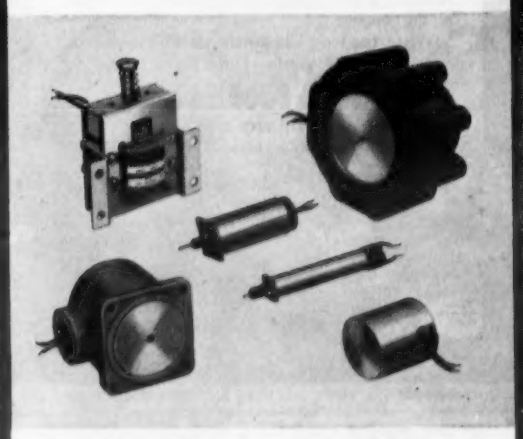
WORTHINGTON

PG.7.120

For more details circle NED-307 K7 on enclosed inquiry slip

NATIONAL ACME
Solenoids
STANDARD or CUSTOM ENGINEERED to fit your design

To meet specific job requirements, solenoids of special shapes and sizes are designed and built through co-operation of our engineers with yours.



NATIONAL ACME OFFERS 2-Way Machine Design Service

First, National Acme supplies solenoids so dependable that they have become standard components in the majority of the most rugged machine tools. Second, National Acme offers you sound application experience, based upon successful performance in many fields.

National Acme solenoids will make *your job easier*—because they do *their job better.*

1. *Armored contact points—for millions of operations*
2. *Non-magnetic retainers*
3. *Compact—for use where space is limited*
4. *Rugged enough for heaviest duty*
5. *Available with terminal blocks and variety of standard mountings*
6. *Made in Push and Pull types, within sizes from 2½ to 21 lbs. at ½-inch stroke; 2 to 25 lbs. at 1-inch stroke.*

If you are ready to discuss your problem, ask us to send a National Acme representative. If you want more information first—send for BULLETIN EM-52

Electrical Manufacturing Division
National Acme
The National Acme Company • 182 E. 131 St. Cleveland 8, Ohio

For more details circle NED-308 K7 on enclosed inquiry slip

HERE THEY ARE!

ALCO-LITE All Steel Ladder-Stands that handle so easily you might think they were made of aluminum!

A gentle push will guide an Alco-Lite Steel Ladder-Stand anywhere you want it!

FREE CATALOG shows you why!

1 to 12 Step Models Available

Aluminum Ladder Company
WORTHINGTON PENNSYLVANIA

For more details circle NED-303 K7 on enclosed inquiry slip

when you have a liquid-moving problem

Ingersoll-Rand's Motorpump is designed to provide maximum performance in all types of installations. Compact design makes installation easy; balanced, precision construction assures peak performance, smooth operation. From ¼ to 75 hp . . . 5 to 2800 gpm . . . to 650 feet head.

Ingersoll-Rand
11 Broadway, New York 4, N.Y.

Send for your copy of this Motorpump Catalog.

9-499

For more details circle NED-309 K7 on enclosed inquiry slip

Veelos Knocks Out Belt Vibration... Up To 90%!

HERE'S PROOF! With an electronic vibration analyzer, your Manheim Veelos representative can measure the exact vibration in your machines. This test is absolutely free and is offered as conclusive proof that Veelos Adjustable V-Belts are better for your drives.

TEST YOUR BELTS! Test Veelos belts against the V-belts you're now using—convince yourself, in this 15 minute test, that Veelos cuts V-belt vibration up to 90%. Smooth running Veelos saves you money by cutting down bearing wear, work spoilage, etc.

Write for free Vibration Demonstration or Free Veelos Data Book to:

MANHEIM
MANUFACTURING & BELTING CO.
605 Stiegel St., Manheim, Penna.

For more details circle NED-310 K7 on enclosed inquiry slip

LOOK WHAT YOU CAN DO WITH

HANDY & HARMAN SILVER BRAZING ALLOYS

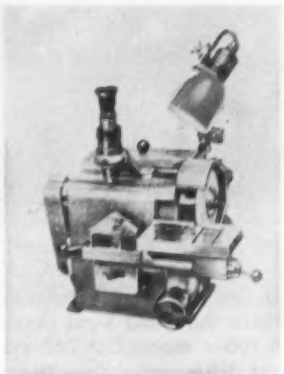
You can join a host of metals, similar or dissimilar, permanently ... quickly ... economically with EASY-FLO or SIL-FOS. These Handy & Harman brazing alloys are ideal for all types of production heating methods: torch, burner, induction, oven, salt bath and others. Successful silver brazing case histories are too numerous to count ... the next could be yours.

Bulletin 20 tells the story of EASY-FLO, SIL-FOS and HANDY FLUX, along with valuable information on joint design and brazing techniques. We would like to send you a copy.

HANDY & HARMAN 82 Fulton Street New York 38, N. Y.

For more details circle NED-311 K7 on enclosed inquiry slip

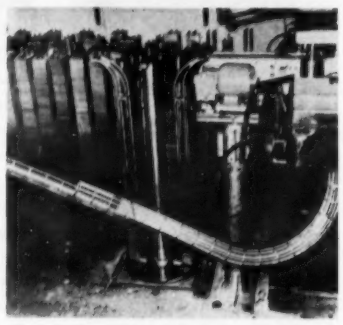
DRILL GRINDER for 0.012 to 0.120-in. drills



Operating simplicity of this SM-3 drill grinder enables even unskilled worker to sharpen drills from 0.012 to 0.120-in. accurately. Drill is simply clamped into holder and checked under the microscope. Holder's shape assures symmetrical sharpenings regardless of predetermined tip angle, backing off angle, or whether drills are left or right hand types. Built-in diamond wheel truing attachment is operated by simply controlling the guard oscillation. Grinder has 220-v three-phase 60-cycle motor and is furnished with microscope, grinding wheel, drill holder light, tweezer and wrench. Made by **Jersey Mfg. Co.**, 444 Livingston St., Elizabeth, N. J.

For more details circle NED-312 K7 on enclosed inquiry slip

STACKING CHUTES carry stampings from presses



Stampings that are springy, small, thin, delicate, or complicated are automatically transported from presses to packaging or assembly lines without damage to product or dies by line of stacking chutes. They carry and stack parts up to 20 ft away from presses without aid of human hands. Normal chute design permits free flow of parts without backing up. Chutes are made of steel rods to size and shape of product being transported. There is no practical maximum thickness or size limitation on stampings that can be handled. Minimum thickness is about 0.065 in. Chutes are mounted on the die shoe of the press bolster and are adaptable to all types of open back inclinable and high production presses and dieing machines. Made by **Clark Industries**, R.F.D. 3, Delaware, Ohio.

For more details circle NED-313 K7 on enclosed inquiry slip

Nuts for Every Purpose

National Machine Products Co.—Finished, National, light, and regular full, jam, thick, slotted, and castle nuts in sizes from ¼ to 3 in. are priced and described in 24-page catalog section on hexagon and 12-pointer nuts. Included is a guide chart for calculating wrench torques for Standard steel hexagon nuts.

For more details circle NED-314 K7 on enclosed inquiry slip

with **Gasoila-Amazing JOINT & SEALING COMPOUND**

Stop those leaks instantly, permanently, safely, economically! Gasoila does a perfect job . . . seals threaded connections, face joints, seams, gaskets. Over 40 years of wonderful results — no failures! Used everywhere . . . petroleum refining, pipe lines, tanks, aircraft, automotive, refrigeration, air conditioning, oil burners, ships, boats, etc., etc.

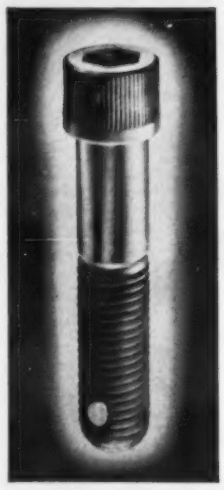
STAYS ELASTIC • Easy to apply • Makes positive joint — but easy to take apart • Prevents corrosion • Withstands vibration • Write for FREE BULLETIN or ask for Small Sample

Insoluble in Gasoline, Oil, Water, Freon, Butane, etc. Underwriters Lab. Approved

FEDERAL PROCESS CO.
1120-A Citizens Bldg. • Cleveland 14, Ohio

For more details circle NED-315 K7 on enclosed inquiry slip

NEW—self-locking UNBRAKO socket head cap screws



The Nylok* self-locking feature locks these screws securely in place, seated or unseated, wherever you stop wrenching! They won't work loose. Can be used repeatedly. Tough, resilient nylon locking pellets permanently installed. Successfully withstand temperatures ranging from —70 to 250°F. Familiar UNBRAKO knurled heads for sure finger grip and fast assembly—accurate hex sockets for positive, nonslip internal wrenching. Heat treated alloy steel, controlled fillets, continuous grain flow lines, fully formed Class 3A threads for maximum strength and exact fit. Can be used as adjusting screws. Pellets act as liquid seals. Standard sizes from #6 to 1 in. diameter. Also available in plated finishes and in stainless steel. Write for Bulletin 2193. Unbrako Socket Screw Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

*TM Reg. U.S. Pat. Off., The Nylok Corporation

UNBRAKO® SOCKET SCREW DIVISION

STANDARD PRESSED STEEL CO.
sps
JENKINTOWN PENNSYLVANIA

We also manufacture precision titanium fasteners. Write for free booklet.

For more details circle NED-316 K7 on enclosed inquiry slip

Low Cost Way to Dump and Store

New Model F1A Pallet Type Phil-Dump

With the use of a lift-truck, a large variety of bulk materials are easily loaded and dumped or stacked and stored with this new labor-saving Phil-Dump. Redesigned to avoid spillage, this money-saving device boasts the sturdy construction for great durability for which all Phillips equipment is famous. Features are a non-slip pallet slot and a patented safety lock which permits automatic but not accidental dumping. Capacity is 1 cu yd. Send order to Salem-Brosius.

SALEM-BROSIUS, INC.
16 Arch Street • Carnegie, Pa.

PHILLIPS MATERIALS-HANDLING EQUIPMENT

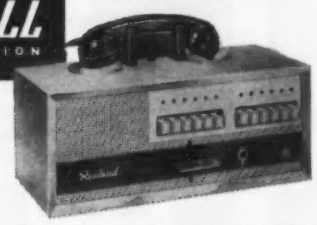
Manufacturers Since 1863

For more details circle NED-317 K7 on enclosed inquiry slip

take the "TURTLE PACE" out of your business with

ELECTRONIC AMPLICALL INTERCOMMUNICATION

featuring new light and chime signals



the "clear line" to everyone in your business

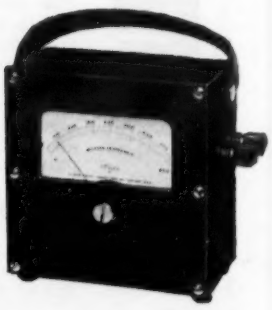
SAVES TIME • CUTS COSTS • Speed up your business pace with this time-saving "clear line" internal communication system. Have *2-second speech contact* within and between all departments—get information, issue instructions, hold conferences, speed action throughout your business—at the touch of a button. AMPLICALL takes the load off busy switchboards, puts an end to wasteful walking and waiting—pays for itself in speedier, more efficient operations. Models now available with new light and chime signals. There is an AMPLICALL system for your exact needs. Write for complete facts today.

See your Classified Phone Book under "Intercommunication" for the nearest AMPLICALL specialist—or mail coupon today for full details.

RAULAND-BORG CORPORATION
3515-D Addison St., Chicago 18, Ill.

▲ For more details circle NED-318 K7 on enclosed inquiry slip ▲

Alnor® PYROMETER TYPE 1500



Checking temperatures of electric heating mantles is but one of the many laboratory temperature jobs performed with consistent accuracy within ¾ of 1% full scale—under all conditions.

Sturdy case protects precision meter movement in portable use. Direct reading scale face can be quickly read at distance—no slide wires or conversion tables needed. Available in ten scale ranges from 0-400° to 0-3000° F. or centigrade equivalents.

Get full details on the Type 1500 in Bulletin 4434. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor **PRECISION INSTRUMENTS FOR EVERY INDUSTRY**

▲ For more details circle NED-319 K7 on enclosed inquiry slip ▲

LEVEL INDICATING SWITCH
usable in sumps, tanks or containers

Designed primarily for use in oil sumps of machine tools, this model 1800 level indicating switch is usable in any tank, vessel or container where a topping or low-level alarm or other level indicating device is needed. It can be used to actuate warning lights or audible alarms. By using suitable relays, it can control equipment or actuate interlocking devices. This control has a Buna-N float switch which is convertible from normally-open to normally-closed, and has contacts for up to 220-v current. It is corrosion resistant and easy to install. Made by **Gems Co.**, Dept. N, Box 220, Newington, Conn.

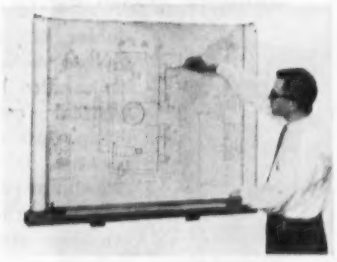
▲ For more details circle NED-321 K7 on enclosed inquiry slip ▲

CUSTOM GASKETS & SHAPES
sizes to 5 ft from various materials

Rubber, neoprene, Chemigun, butyl, polyvinyl chloride and sponge are materials from which custom gaskets and shapes from ¼-in. to 5-ft OD can be made. Gaskets or other parts can be cut on short notice upon receipt of a sample or drawing of the part. Made by **Central States Industrial Supply Co.**, Room 536, Terminal Tower, Cleveland 13, O.

▲ For more details circle NED-322 K7 on enclosed inquiry slip ▲

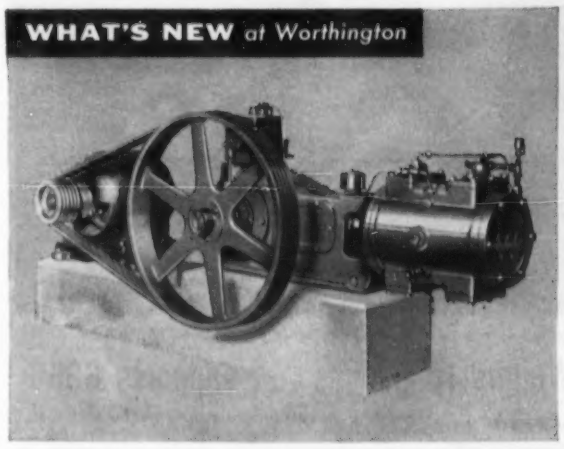
LARGE-PRINT VIEWER
displays up to 40-ft long drawings



Blueprints, drawings, photographs, maps, and other prints up to 40 ft in length are displayed conveniently in sections with this Roll-O-Print viewer. It can be mounted on wall, table, or desk. Viewing area is about 40 x 48 in. Model A, listing at $80, can be mounted on any flat surface with brackets or screw clamps. Optional plywood or Masonite backing facilitates marking on prints. Model B, priced at $55, clamps on any horizontal surface. Interchangeable rolls provide for storing prints 36 in. wide by any length up to 40 ft. Distributed by **Aqua Sportsman, Inc.**, Dept. 1, 2518 Leslie Ave., Cincinnati 12, Ohio.

▲ For more details circle NED-323 K7 on enclosed inquiry slip ▲

WHAT'S NEW *at Worthington*



WATER-COOLED COMPRESSOR
best bet for heavy duty applications

For heavy duty compressor applications, look into the benefits of using Worthington water-cooled units. The work-horse of the line, a type HB compressor, will give you 24-hour-a-day, 7-day-a-week service. For the really big jobs a Worthington water-cooled unit is your best bet. Belt-driven Worthington HB compressors are available in ratings from 50 to 2,000 cfm. Write for free descriptive bulletin. Worthington Corporation, Section NED, Harrison, New Jersey.

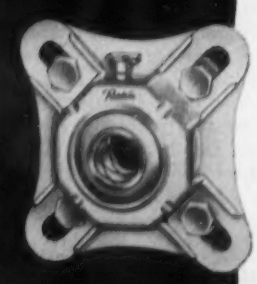
WORTHINGTON

PC.7.12B

▲ For more details circle NED-324 K7 on enclosed inquiry slip ▲

Randall FLANGE PILLOW BLOCKS
GREATER EFFICIENCY AND ECONOMY IN EVERY SIDE-MOUNTED APPLICATION

QUIET IN OPERATION
AUTOMATIC SELF-LUBRICATION
SELF-ALIGNMENT
LONG TROUBLE-FREE SERVICE



Like all Randall Pillow Blocks, these flange models incorporate Randall's "DEEP-WELL" ball assemblies with a grooved and graphited cast-bronze bushing. The unique automatic double lubricating principle, coupled with Randall's exclusive graphite mixture, permits extended periods of operation without maintenance. Easier to install Randall Flange Pillow Blocks are available for most side-mounted applications for shaft sizes from ½" to 3 ".

Randall Pillow Blocks may be modified for unusual conditions and adapted to many different styles of lubrication. In smaller shaft sizes, Randall Pillow Blocks are available with sintered bronze bushings for light duty applications. Contact your nearby Randall distributor today. He's listed in the yellow pages of the telephone directory under "Bearings."

RG10

Randall

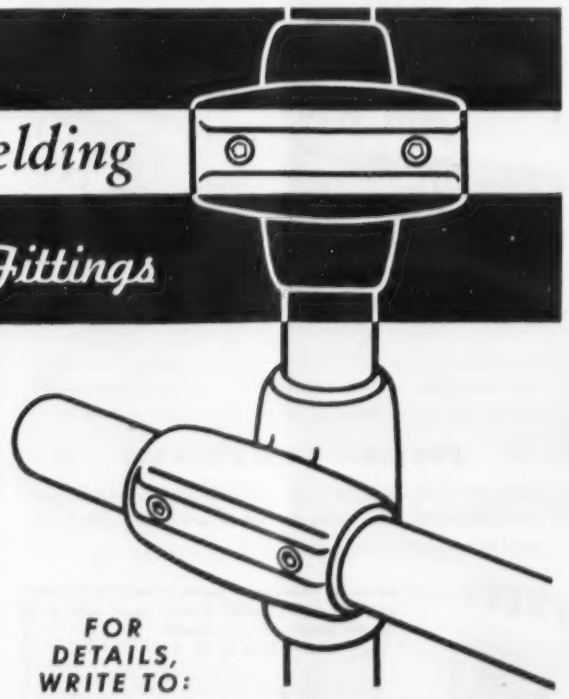
LOOK TO RANDALL FOR YOUR SLEEVE BEARING REQUIREMENTS

Clip this coupon to your letterhead, include your name and department and send it to Randall Graphite Bearings, Inc. We will send you the complete Randall Pillow Block Catalog.

RANDALL GRAPHITE BEARINGS, INC.
1007 South Greenlawn Avenue, Lima, Ohio

▲ For more details circle NED-325 K7 on enclosed inquiry slip ▲

No Threading, No Welding with NU-RAIL *Slip-on Fittings*



Precision-engineered NU-RAIL slip-on pipe fittings now make it possible for your own maintenance or shop employees to build sturdy storage racks and safety railings. No professional skills are required.

The exclusive NU-RAIL offset design permits continuous pipe lengths to pass through the fittings, and *cross each other without cutting!*

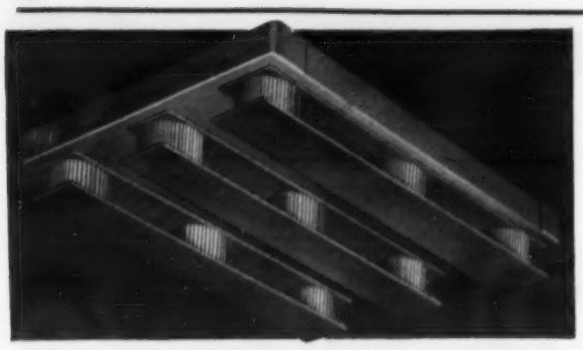
- You save TIME, and you save up to 80% of labor cost!
- NU-RAIL fittings are RE-USABLE, yielding a maximum amount of pipe salvage, and more *un-cut* pipe salvage than any other fitting method.
- NU-RAIL fittings are ADJUSTABLE without dismantling, adapt readily to your changing needs.
- Fit Standard I.P.S. size pipe.

SHEET STORAGE SAFETY RAILINGS PALLET RACKS

FOR DETAILS, WRITE TO:

THE HOLLAENDER MANUFACTURING CO.
DEPT. X • 3841 SPRING GROVE AVENUE • CINCINNATI 23, OHIO

▲ For more details circle NED-320 K7 on enclosed inquiry slip ▲



Bottom view of Signode expendable pallet showing patented corrugated posts.

Weighs 10 pounds . . . supports 6000

Low cost	Signode expendable pallets are low in first cost; eliminate all maintenance cost, save storage space.
Light weight	Cut shipping costs every mile, every load. Easy and clean to handle.
Strong	Rugged construction proved in use and in famous Signode testing laboratory.
Versatile	Standard or special sizes. Post placement variable. Tray or flat tops.
Expendable	No returns, therefore no shipping, record-keeping or storage costs on returns.

Competent Signode assistance on expendable pallet design and unitizing methods is available. For information on Signode Addison-Semmes pallets, write:

SIGNODE STEEL STRAPPING CO.
Dept. SP, 2643 N. Western Avenue, Chicago 47, Illinois
Offices coast to coast.
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

For more details circle NED-326 K7 on enclosed inquiry slip

RAYMOND Electric Pallet Truck Model WL4F capacity 4000 lbs.

You're a SM-O-O-TH operator George!

George: Aw Susie, where'd you hear that!

Susie: From the boys in the warehouse . . . they say you're as gentle as a kitten.

George: Sure . . . and you wouldn't believe these muscles had so much power, would you?

Susie: Why George, I'd believe anything about you.

George: Me! I'm talking about this RAYMOND Electric Pallet Truck!

There's no other truck quite like it, Susie. Those "muscles" have twice the voltage of conventional walkies . . . extra power on ramps even with full capacity loads. Yet, this electric pallet truck gently maneuvers in close quarters and narrow aisles because of fingertip controls on the handle . . . shorter overall length and wide steering arc. Safe in tight spots . . . automatically reverses when the safety button on the handle touches the operator's body. Complete with battery and charger at a price so low you wouldn't think it possible.

Send for complete details!

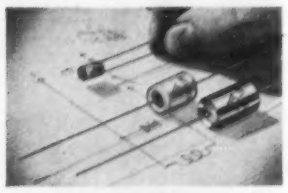
The RAYMOND CORPORATION
4148 Madison Ave., Greene, N.Y.

☐ Send latest Raymond Electric Pallet Truck Bulletin
☐ Have a Raymond representative call on me

NAME TITLE
COMPANY
STREET
CITY STATE

For more details circle NED-327 K7 on enclosed inquiry slip

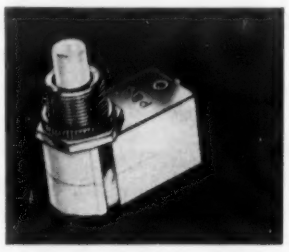
CONTACT ARC SUPPRESSORS are about the size of a match head



Arcing and erosion across the contacts of relays or switches in most electrical circuits is prevented by these miniature selenium contact protectors. Three available types are extremely small encapsulated diodes only slightly larger than a match head, fiber tube cartridge types, and hermetically sealed cartridge types. Direct current range is 15 to 154 v at coil currents from 250 to 600 ma. Easy to install with pigtail connections, they greatly extend the operating life of equipment. Made by **International Rectifier Corp.**, 233 Kansas St., El Segundo, Calif.

For more details circle NED-328 K7 on enclosed inquiry slip

PUSHBUTTON SWITCH offered in variety of types



Fourteen ounces of pressure actuate the plunger of 1205 series momentary contact pushbutton switches. Made with over-center snap action for instant contact and release, the alternating-direct current units are rated 6 amp, 125 v. Single-pole, two-circuit, and three-way types with contacts normally open or closed are available with wire leads, solder lugs, and binding screws. Plug-in terminals are available on order. Size is 1⅛ x ⅝ x 1½ in. Made by **Pass & Seymour, Inc.**, Dept. S-5, 50 Boyd Ave., Syracuse 9, N. Y.

For more details circle NED-329 K7 on enclosed inquiry slip

MOLTEN METAL PUMP handles metal up to 700° F

Solder, tin, zinc, lead, and other molten metals up to 700° F can be handled by the model 9025-M vertical centrifugal Gusher pump. Safe motor operating temperature is maintained by three aluminum cooling fans which rotate with the one-piece extended stainless steel shaft. Two large ball bearings, packed with high temperature silicone grease, are mounted within the motor and out of the high temperature area. Pump is available with ¼-hp, 1140-rpm or ¾-hp, 1725-rpm Class B insulated motors, for capacities up to 7 gpm and heads up to 8 ft. Made by **Ruthman Machinery Co.**, 1810 Reading Rd., Cincinnati 2, Ohio.

For more details circle NED-330 K7 on enclosed inquiry slip

Pack, Inspect and Assemble

SPEEDS UP PRODUCTION

An all-purpose portable belt conveyor, work table and straight-line production system, with and without side leaves. Available up to 100 ft. long in 10 ft. easily assembled sections.

PORTABLE OR STATIONARY

The perfect mechanized table for assembly, inspection and packaging operations. Available in steel or stainless steel with fixed or variable speed.

FREE!

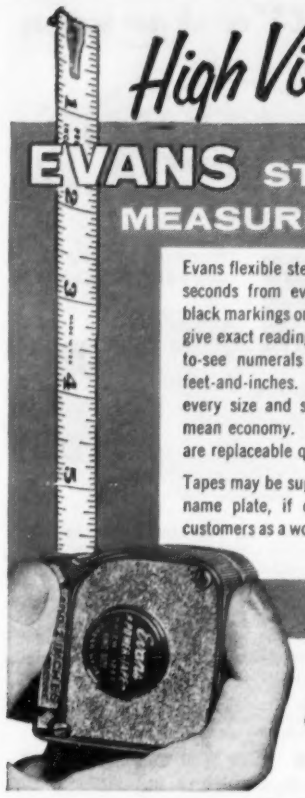
ISLAND EQUIPMENT CORP. Dept. NED-10
27-01 Bridge Plaza North
Long Island City 1, N. Y.

Please send Bulletin 1P-1 on Island Unitized Conveyor Tables.

NAME
ADDRESS
CITY STATE

For more details circle NED-331 K7 on enclosed inquiry slip

High Visibility EVANS STEEL MEASURING TAPES



Evans flexible steel measuring tapes shave seconds from every measuring job. Jet black markings on snowy white background give exact readings at a glance. Big, easy-to-see numerals show both inches, and feet-and-inches. There's an Evans tape in every size and shape . . . at prices that mean economy. Best of all, Evans blades are replaceable quickly, easily.

Tapes may be supplied with your company name plate, if desired, to give to your customers as a wonderful good-will builder!

Ask your supplier about EVANS Steel Measuring Tapes

Evans RULE CO.
Elizabeth, N. J.
Montreal, Quebec

MICRO SWITCH . . . FIRST IN PRECISION SWITCHING

MICRO SWITCH "ML" Switches combine rugged construction with precise operation

The switching unit is enclosed within a sturdy aluminum housing which protects the precision switching unit from physical damage, provides a means of mounting and permits conduit-type wiring. Both single- and two-circuit switching units are available. Electrical rating is 20 amperes 120, 240, 480 volts ac; ½ ampere 115 volts dc; ¼ ampere 230 volts dc; ¾ H.P. 110 volts ac; 1½ H. P. 220 volts ac.

Read this "how others do it" publication

MICRO Tips is full of practical ideas for using snap-action switches. Write today if you are not now on our mailing list.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
In Canada, Leaside, Toronto 17, Ontario • FREEPORT, ILLINOIS

For more details circle NED-332 K7 on enclosed inquiry slip

Bravissimo!

The Very Best—That's service Rhodes delivers when design, development and short or long run production of mechanical timing devices is a must! Rhodes can collaborate with you to incorporate any combination of circuits, audible signals or time-delayed action in your product—then fabricate one . . . hundreds . . . thousands of MARK-TIME timing devices to your specifications from stock parts. Bottlenecks . . . delay . . . uncertainty—all are eliminated when you rely on MARK-TIME.

For full information on solving your timing applications, write today!

Representatives in principal cities in the U.S. Manufactured and sold in Canada by: Sperry Gyroscope Ottawa Ltd., Ottawa, Ontario, Canada

M. H. RHODES, INC.
179 BARTHOLOMEW AVE.
HARTFORD, CONNECTICUT

For more details circle NED-333 K7 on enclosed inquiry slip

tricky

BENDS ARE EASY WITH PEDRICK BENDERS

See Pedrick Exhibit at METAL SHOW, Chicago, Nov. 4-8, Booth 1853

Complicated pipe, tube or structural metal bends are a cinch with Pedrick Production Benders—on either a production or job basis.

Show us your problem—with drawings, if possible—and we'll show you the answer. Write PEDRICK TOOL AND MACHINE Co., 3640 N. Lawrence St., Phila. 40, Pa. Dept. 6.

FREE "PEDRICK LINE" BULLETIN. WRITE TODAY.

PEDRICK production benders

For more details circle NED-334 K7 on enclosed inquiry slip

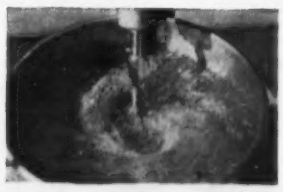
The versatile *Lightnin* Portable gives you your choice of mixing action

Getting the right *kind* of agitation for your product is easy with a LIGHTNIN Portable Mixer. You can adjust it to the "just right" position for any shape of tank.

A patented ball and socket swivel clamp is behind the LIGHTNIN's easy adjustment. It gives you the equivalent of *three mixers in one.* And it's guaranteed to give you exact mixing results, or your money back.

MAY BE ADJUSTED TO THREE POSITIONS SHOWN... *AND ANY INTERMEDIATE POSITION*

When the shaft is on the tank's centerline, forces are balanced and a vortex is created. Desirable for drawing down light powders but inefficient for general mixing.



With the shaft in this quadrant, a long swirl—without vortex—is created. Very little top-to-bottom turnover characterizes this type of agitation. It is suitable for washing fibers, for gas absorption, etc.

This is the recommended position for most mixing jobs. Heavy top-to-bottom turnover leads to intimate blending. The propeller stream sweeps the tank bottom and suspends solids.

Proper positioning also depends on the type of mixer you select. Complete instructions are sent with each mixer.

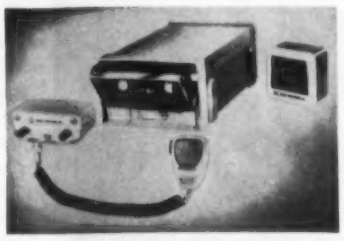
FREE CATALOG on Portable LIGHTNIN Mixers is yours for the asking. Just check the reader service slip for Catalog B-108. It describes the 30 available models—ranging in size from ⅛ to 3 HP—and tells how to use them most effectively.

MIXING EQUIPMENT Co., Inc.
165-k Mt. Read Blvd., Rochester 11, N.Y.

In Canada:
Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 10, Ont.

For more details circle NED-335 K7 on enclosed inquiry slip

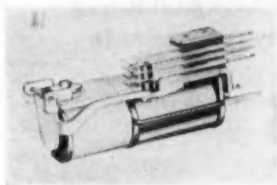
TWO-WAY RADIOS have transistorized power supplies



Reliability and minimum of maintenance are reported for T-Power two-way mobile radio units which utilize completely transistorized power supplies. Black finned heat-dissipating radiators of the power supplies assure efficient operation under all conditions. Use of transistors eliminates the need for a vibrator in both the transmitter and in the receiver. They are unharmed by short or overload. Equipment is designed for 12-v battery operation on cars and trucks. Made by **Motorola Inc.,** Communications & Electronics Div., Dept. NED, 4501 W. Augusta Blvd., Chicago 51, Ill.

For more details circle NED-336 K7 on enclosed inquiry slip

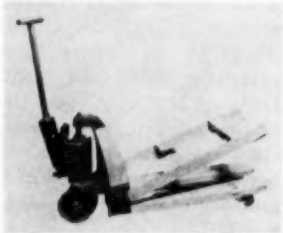
TELEPHONE RELAY contacts rated 3 amp, 150 w ac



Contact combinations up to ten-pole double-throw are available on this telephone relay. Contacts are rated for 3 amp, 150-w ac, noninductive load. Relay can be supplied with copper head for delayed attract up to 0.1 second, depending upon spring assembly and coil power, and with copper heel for delayed release up to 0.4 second with small spring assembly and power coil. Relay interchanges with other telephone relays now being used. Made by **Guardian Electric Mfg. Co.,** 1621-I W. Walnut St., Chicago 12, Ill.

For more details circle NED-337 K7 on enclosed inquiry slip

HYDRAULIC PALLET TRUCKS in 2250 and 4500-lb capacities



Capacities of 2250 and 4500 lb are offered in this British-made Portapal hydraulic hand pallet truck. Unit has welded box-girder frame with capacity far in excess of rated load, built-in overload valves and oil filter screens, positive leveling forks, 220-degree steering, auxiliary lifting rollers for both entry and pull-out, SKF deep groove ball bearing on all wheels, and replaceable bushings with grease fittings. Five standard widths and six standard fork lengths are offered. Steel wheels are standard, with rubber or laminated plastic wheels being optional. Distributed by **Equipment Service, Inc.,** 5107 Columbia Ave., St. Louis 9, Mo.

For more details circle NED-338 K7 on enclosed inquiry slip

If you are bothered by lubricating, fuel or process oil seepage when valves are supposedly closed "tight," try an O-B No. 101 brass disc valve with the hair-line closure.

This valve is especially designed for oil and other hard-to-hold fluids. The seat and disc are machined to make a fine contact that fractures surface tension of oil film, giving a tight, leakproof shut-off.

Ask your distributor about O-B No. 101 globe or No. 102 angle valve, for all standard pressure oil, water, gas, or steam service.
4730-V

O-B VALVES Ohio Brass MANSFIELD OHIO, U. S. A.

For more details circle NED-340 K7 on enclosed inquiry slip

10% to 25% MORE SERVICE with Mecco SAFETY Hevi-Bevl Letters & Figures

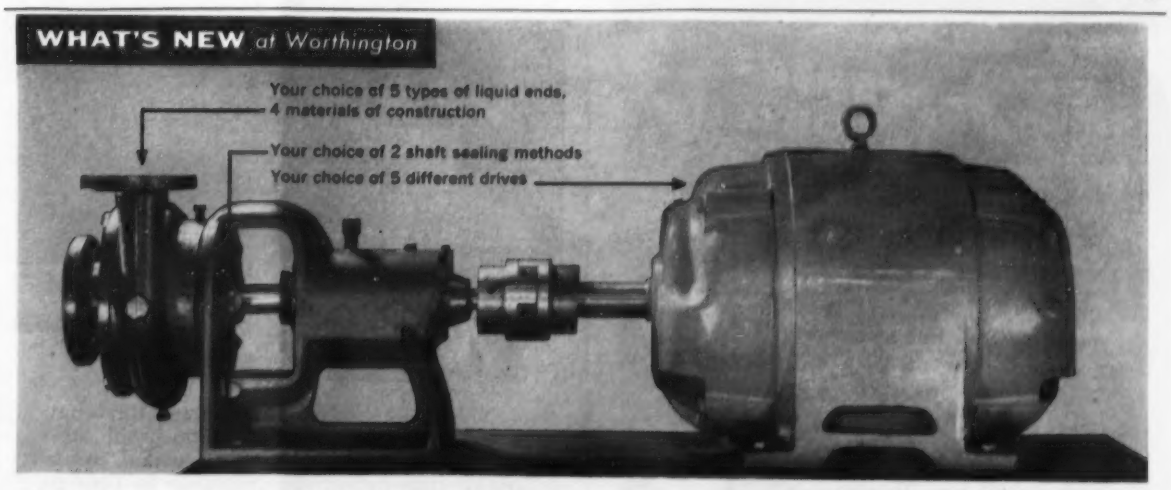
Non-spalling, non-mushrooming features of Mecco Safety Steel give superior service on any stamping job. Characters are deep cut with 45° bevel, and stamps have rounded heads for maximum safety and central striking point. *Write for Bulletin LF-108.*

INDESTRUCTIBLE PLASTIC BOX with transparent lid furnished with stamps ¼" and smaller.

Mecco SAFETY MARKING TOOLS **M.E.CUNNINGHAM CO.**
1055 CHATEAU STREET PITTSBURGH 33, PA.

For more details circle NED-341 K7 on enclosed inquiry slip

WHAT'S NEW *at Worthington*



NOW! 70,480 PUMP COMBINATIONS TO CHOOSE FROM

The standardized line that lets you "custom-build" at no extra cost

Whether you use one pump or many, Worthington's line of Standard End Suction Centrifugal (SESC) pumps give you many advantages. You can choose direct motor drive, monobloc motor, monobloc turbine, direct or belt drive. You also have a choice of materials of construction, types of liquid ends, sealing methods and drives—70,480 combinations in all. Because each is built from standard parts, you get prompt delivery at competitive prices.

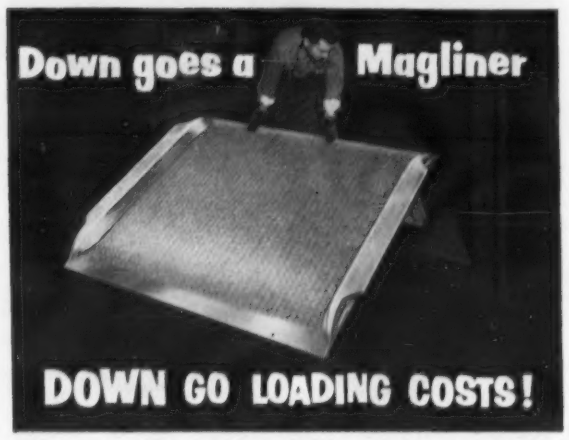
After your SESC pump is installed you benefit from its standardization. Because many, many parts are interchangeable between pump types and sizes, you need as much as 50% less spare parts inventory. Because the entire line is built to the same basic design you cut maintenance, reduce downtime. If you know one SESC pump, you know them all.

Write for free booklet explaining in detail how SESC standardization means real savings to all pump users. Worthington Corporation, Section NED, Harrison, New Jersey.

WORTHINGTON

PC.7.12F PC.7.12E

For more details circle NED-339 K7 on enclosed inquiry slip



And they'll stay down with Magliner magnesium dock boards on the job! Magliners speed loading, eliminate dock congestion . . . get extra work from power trucks and other loading equipment. Magliners are magnesium-light—easy to put down . . . easy to move. No heavy lifting . . . no injury hazards. Men, loads and equipment move *fast, sure, safe.* Magliners are magnesium-strong, too . . . built to take it . . . safely handle loads up to 20,000 lbs. Low initial cost. Less maintenance. Dependable long-life service. *Economy* and *cost-savings* right down the line! Put all these advantages to work for you. Put Magliners on your dock!

Write for Bulletin DB-204
MAGLINE INC., P. O. Box 910
PINCONNING, MICHIGAN

MagLiner MAGNESIUM DOCK BOARDS

Canadian Factory: Magline of Canada, Ltd., Renfrew, Ontario

For more details circle NED-344 K7 on enclosed inquiry slip

- SLIPS ON
- CAM TIGHTENS
- HOLDS TIGHT
- NEVER FAILS

BRONZE
ALUMINUM
MONEL
STAINLESS STEEL
SEMI-STEEL

KAMLOK QUICK COUPLERS

The Fastest, Safest, Surest Coupling Known

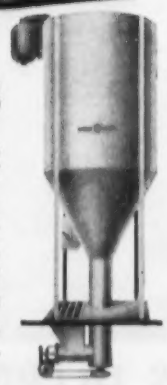
All styles of adaptors fit in all styles of couplers of the same size.
Write for Free Bulletin F-10

JORDAN CORPORATION
DIVISION OF OPW CORPORATION
6013 WIEHE ROAD, CINCINNATI 13, OHIO

For more details circle NED-345 K7 on enclosed inquiry slip

CUT MIXING COSTS!

SPROUT-WALDRON
VERTICAL MIXERS



These mixers handle an amazingly wide variety of materials with less horsepower, less floor space, less maintenance, less first cost than any other type of mixers. Sizes up to 1500 cu. ft. can operate on as little as 30 h.p. They're completely self-cleaning. Ideal for use as agitated storage reservoirs.

Write for Bulletin 97

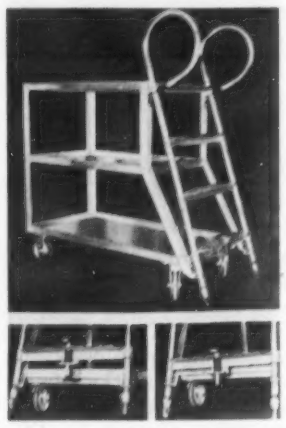
Sprout-Waldron also offers a complete line of horizontal mixers. Write for details.

SPROUT-WALDRON
Manufacturing Engineers Since 1866
8 LOGAN STREET • MUNCY, PA.
EQUIPMENT FOR SIZE REDUCTION—MIXING & BLENDING — BULK MATERIALS HANDLING — PELLETING & CUBING — PRODUCT CLASSIFICATION

IN/503

For more details circle NED-346 K7 on enclosed inquiry slip

STOCK-PICKING TRUCK locks to floor when stepped on



Safety for user is assured in the Step-Lock design incorporated in series S Stock-picker trucks. The spring-loaded ladder is depressed and locked into positive bearing position on the floor by a simple pedal on the bottom step which is actuated by the worker's foot. Truck is then stable, and operator can work safely from top level. Working reach is from 9 to 10 ft. Three nonslip steps are used to mount platform which is 38 in. above the floor. Made by **Rol-Away Truck Mfg. Co.,** Dept. N, 6143 S. E. Foster Rd., Portland 6, Oreg.

For more details circle NED-347 K7 on enclosed inquiry slip

PLASTIC "BLISTER" PACKAGER produces 150 units per minute

Drug, cosmetic, hardware, and other items can be packaged in transparent plastic "blisters" by this high speed automatic machine. It is capable of packaging 150 units per minute of one item or as many as six items simultaneously at a rate of 25 each per minute. The Blisto-Matic machine inserts preformed plastic blisters, loads them with merchandise, feeds a printed card, heat seals the blister to the card, and ejects it. A film top may be substituted for the printed card. Machine has controls for the entire operating cycle so that blisters of any thickness and any material can be packaged up to a maximum size of 5 x 20 in. Made by **Packaging Industries, Inc.,** 156 Pine St., Montclair, N. J.

For more details circle NED-348 K7 on enclosed inquiry slip

Decorative Metal Moldings

Serrick Corp., John Lees Div.—78-page illustrated catalog describes and gives application data on a complete line of metal moldings fabricated from stainless and cold rolled steel, brass, bronze, and aluminum. It is available to engineers, designers, and manufacturers.

For more details circle NED-349 K7 on enclosed inquiry slip

These new motors are designed for tough operating conditions. Corrosion-proof cast-iron housings and specially sealed joints make this motor impregnable to foreign material.

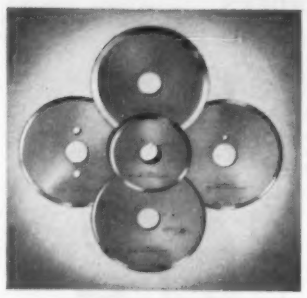
Simple brake design has only six parts and requires no control wiring or auxiliary electrical equipment. Requires a minimum of space, and wearing parts are easily accessible. For further information write for Bulletin B-2503.

B-1633-A

RELIANCE ELECTRIC AND ENGINEERING CO.
Dept. 2410A, Cleveland 17, O. Canadian Div.: Welland, Ont.
Sales Offices and Distributors in Principal Cities

For more details circle NED-350 K7 on enclosed inquiry slip

100 CUTS ONLY



Continental
PIPE & TUBE CUT-OFF WHEELS

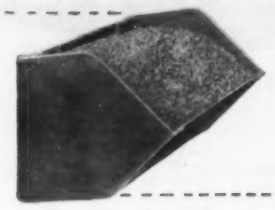
Precisely tempered steel for long life—more cuts between sharpenings. Bevels available for every cutting problem. Fit Continental and all other rotary Cut-Off Machines. They're profitable — try them and prove it to yourself. *Request Catalog today.*

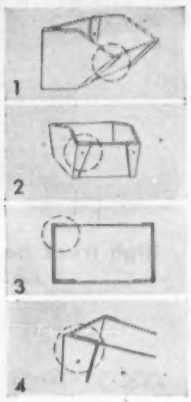
Continental MACHINE CO.
SINCE 1919
1952 N. MAUD AVE. • CHICAGO 14, ILL.

For more details circle NED-351 K7 on enclosed inquiry slip

For more details circle NED-352 K7 on enclosed inquiry slip

LINK-BELT "HS" elevator buckets





4 ways stronger

(1) Reinforced corners. (2) Rigid crimped backs. (3) Body and end plates of same gauge steel. (4) Double-thick metal for end bolt holes. You get all these long-life features with Link-Belt "High-Speed" buckets. Ideal for handling fine, free-flowing, granular materials. For facts, write for your copy of Folder 2548-A.

LINK-BELT

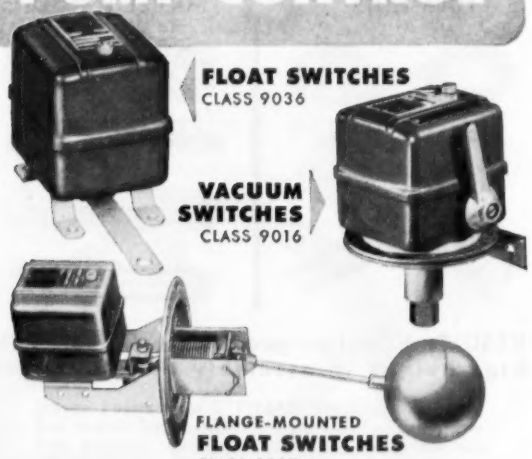
"HS" ELEVATOR BUCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,498

For more details circle NED-353 K7 on enclosed inquiry slip

a Complete Line of

H.P. RATED VACUUM HEATING PUMP CONTROL



Write for Bulletin 550, Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin

ECaM HEAVY INDUSTRY ELECTRICAL EQUIPMENT...NOW A PART OF THE SQUARE D LINE

SQUARE D COMPANY

For more details circle NED-354 K7 on enclosed inquiry slip

ALL-NEW!

50TH ANNIVERSARY "DETROITER" ELECTRIC HOIST

STREAMLINED... everything built-in, enclosed, protected; no HUNG-ON parts; modern in every detail.

HOOK STOPS... automatic up-stop, automatic down-stop; one of the several safety features included on the Detroiter.

SUSPENSION... various types available, including power travel.

PUSH BUTTON CONTROL... low voltage, pilot circuit.

The Detroiter can also be furnished for AIR MOTOR operation in place of electric motor.

A BALANCED DESIGN—RUGGED, SMOOTH, QUIET, ACCESSIBLE

Inquire about the "Detroiter"—all new Electric Hoist; get further information, phone or write today. Ask for Bulletin 850

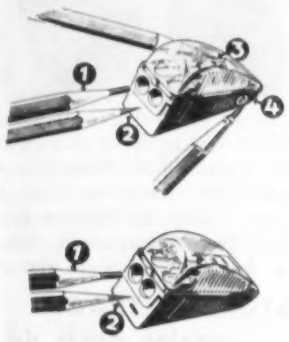
DETROIT HOIST and MACHINE CO.

8231 MORROW STREET • DETROIT 11, MICHIGAN

For more details circle NED-355 K7 on enclosed inquiry slip

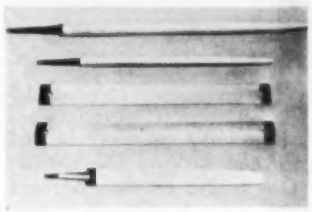
PENCIL SHARPENERS hold extra Swedish steel blades

Transparent top of Universal and Super pencil sharpeners which collects the shavings can be removed when full without dirtying the hands. Universal sharpener and pointer has four Swedish steel blades. Blade 1 shaves only wood; blade 2 sharpens only lead to a fine point; blades 3 and 4 sharpen artists' pencils to 3 and 2-mm diameter points, respectively. Super sharpener performs functions of first two blades. Both models hold extra blades. Available from **Alvin & Co.**, Palisado Ave., Windsor, Conn.



For more details circle NED-356 K7 on enclosed inquiry slip

CHROME PLATED FILES Swiss and American patterns



Kromolloy chrome plated Swiss and American pattern files are nonclogging when used in the correct application and are rust resistant. Plating extends their life to twice that of unplated files. They dissipate heat rapidly on the cutting edge. Base metal is crucible steel. Made by **Tiarco Corp.**, Dept. N, Clark, N. J.

For more details circle NED-357 K7 on enclosed inquiry slip

DIAMOND DRILLING UNIT with bits for up to 1 ¾-in. holes

Diamond drilling combination includes heavy-duty 2500 - rpm drill with integral water swivel, 10-ft electric cable and water hose, and steel carrying case. Complete kit weighs 15 lb. Unit is designed for drilling anchor holes or small conduit and pipe holes in ceramic tile, granite, marble, concrete, or other nonreinforced masonry. Water swivel supplies water to flush away cuttings. Bits for up to 1¾-in. diameter holes are available. Made by **Wheel Trueing Tool Co.**, Truco Water Swivel Div., 3200-220 W. Davison Ave., Detroit 38, Mich.

For more details circle NED-358 K7 on enclosed inquiry slip

For reducing finishing costs . . .

try JEWEL BRAND ABRASIVE BELTS

THE UNIFORMLY-HIGH QUALITY of JEWEL BRAND Abrasive Belts saves time, reduces operator fatigue and results in lower finishing costs. It is obtained through a simple system of continuous quality control made effective by the attitude and skill of veteran workers. All JEWEL BRAND belts feature the unique velvet joint . . . longer lasting according to performance records.

JEWEL BRAND belts are available in the precise size and grit to meet every grinding, finishing or polishing need. For details, write ABRASIVE PRODUCTS, INC., 525 Pearl St., South Braintree 85, Mass.

JEWEL BRAND *coated* **ABRASIVES**

For more details circle NED-359 K7 on enclosed inquiry slip

get the facts on **Silicone Based Paints**

. . . to improve product finishing . . . reduce maintenance costs

Send for this brochure and list of leading manufacturers of paints formulated with Dow Corning Silicones.

first in silicones

Address Dept. 5422

Dow Corning Corporation

MIDLAND, MICHIGAN

For more details circle NED-360 K7 on enclosed inquiry slip

These Flexible Coated **PIONEER** Gloves Provide Long Wearing Liquidtight Protection For Materials Handling

Neoprene Coated Flannel Stanzoil Pacemakers

Length	Style	Weight	Model
10"	Knit wrist	Light	80
10"	Knit wrist	Industrial	90
10"	Knit wrist	Heavy Duty	95
10"	Gauntlet	Industrial	100
10"	Gauntlet	Heavy Duty	105
12"	Gauntlet	Industrial	120
12"	Gauntlet	Heavy Duty	125
14½"	Gauntlet	Industrial	140
14½"	Gauntlet	Heavy Duty	145
18"	Gauntlet	Industrial	180
12"	Gauntlet	Twin lined*	225

* No. 225 designed to protect hands from extreme hot and cold temperatures.

Pylox™ Coated Jersey Stanflex

Model	Style	Size	Length
5062	Knit wrist	Men's	10"
5052	Knit wrist	Women's	10"
5232	Band top	Men's	11"
5132	Gauntlet	Men's	12"
5252	Gauntlet	Men's	14½"

FREE Hand Protection Analysis . . . Send a description of your job requirements (length, dexterity, wear resistance, chemicals used, importance of safe grip, hot or cold temperature extremes, fatigue factor and sizes) to our "Hand Protection Clinic." New catalog and price list also available on request.

the **PIONEER** *Rubber Company*

234 Tiffin Road, Willard, Ohio

For more details circle NED-361 K7 on enclosed inquiry slip

SAVE $2000 a year

Banish old fashioned hand sweeping

Parker FLOOR SWEEPERS

FACTORIES WAREHOUSES SHOPPING CENTERS

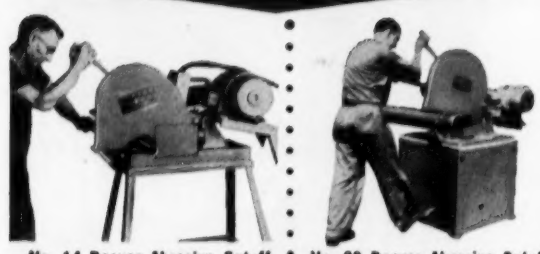
Write today for further information on the complete line of Parker Manual and Power Sweepers

PARKER Sweeper Company, Springfield, Ohio
Dept. NE

▲ For more details circle NED-362 K7 on enclosed inquiry slip ▲

FOR ONLY $540.00

MANY USERS ARE SAVING THOUSANDS OF DOLLARS IN METAL CUTTING COSTS!



No. 14 Beaver Abrasive Cutoff $540 • No. 20 Beaver Abrasive Cutoff $995

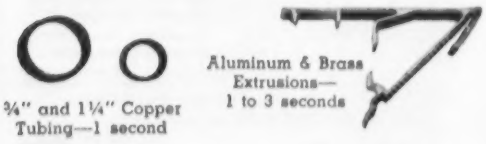
OTHER BEAVER ABRASIVE CUTOFF MODELS

Any-Angle Cutoff • Hi-Boy Cutoff • Oscillating-Head Cutoff
Wet Cutoff • Trailer Mounted Cutoff (gas and electric driven)

LOOK AT THESE FABULOUS CUTTING TIMES!

2" Cold Rolled—10 seconds
5"x5"x⅝" Angle—12 seconds
3" Cast Iron Pipe—6 seconds

3" U Channel—4 seconds
4" Steel Pipe at a 45° Angle—12 seconds
1½" Aluminum Bar—2 seconds



¾" and 1¼" Copper Tubing—1 second
Aluminum & Brass Extrusions—1 to 3 seconds

1" Formed Mild Steel—3 seconds
1" Stainless Tubing—1 second

Send us samples of the tubing you wish cut. Sample cuts of your material will be returned to you with a time study and recommendations. We also invite you to visit our plant and see the different Beaver Abrasive Cutoff models in use

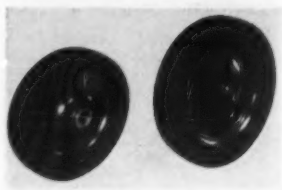
CAN'T TELL IT ALL HERE! Write for latest facts on all Beaver Machines!

BEAVER PIPE TOOLS INC. 373-500 Dana Ave. WARREN, OHIO

HAVE A CUTTING OR THREADING PROBLEM? Let Our Engineering Research Department help you solve it.

▲ For more details circle NED-363 K7 on enclosed inquiry slip ▲

WHEELS & CASTERS
load-rated at 165 lb



Industrial wheels are available as individual units for use on two-wheel hand trucks or various pieces of portable equipment, or mounted as swivel or ridged casters. They are rated for 165-lb loads, have roller bearings, and are available in 8 and 10-in. diameters with axle sizes of ½, ⅝, and ¾ in. Tires are ¾-in. tapered sidewall industrial type. Made by **Neilson Wheel Co.**, Dept. A, 1603 N. 27th St., Milwaukee 8, Wis.

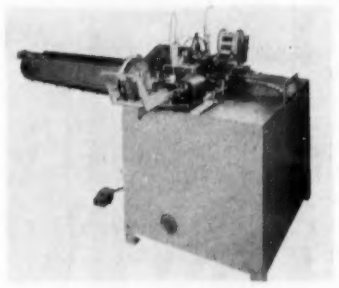
▲ For more details circle NED-364 K7 on enclosed inquiry slip ▲

STORAGE TRACK
moving parts do not touch

Parts that would be damaged by contact with each other during conveying are protected by this "flipper" type storage rack which, being inclined, allows parts to move by gravity. It can be used with any parts which will roll. Weight of part depresses the leading end of a counterbalanced flipper, raising the opposite end to stop the following part. When the first part leaves the downstream end, all following parts advance one station. Ball bearing flipper faces contacting parts can be covered with nylon, Micarta, or other protective materials. Made by **Cargill Detroit Corp.**, Dept. DAC, Birmingham, Mich.

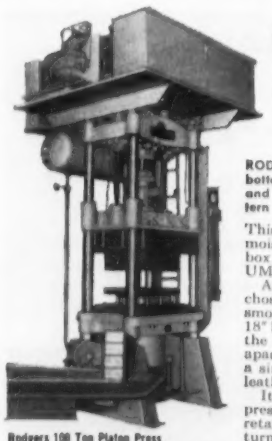
▲ For more details circle NED-365 K7 on enclosed inquiry slip ▲

LABELING MACHINE
applies label to small box ends



Heat - seal labels from a continuous roll are applied to one or both ends of small or medium size cardboard boxes by this Dumatic Unipack labeler. Typical application in the hosiery industry has this machine applying both top and bottom labels to stretch socks simultaneously at a rate of 40 per minute. For small box end labeling, machine can apply labels in the form of an L or a U. A coding device for imprinting sizes, color, style, etc., as the label is applied is optionally available. Made by **Globe Ticket Co.**, Dept. NE, 112 N. Twelfth St., Philadelphia 7, Pa.

▲ For more details circle NED-366 K7 on enclosed inquiry slip ▲



Rodgers 100 Ton Platen Press with high speed circuit for fast approach and return of platen. Upper knock-outs pneumatic die cushion. Accurate clamping pressures insure smooth, even draws.

draws 5½" deep in one SMOOTH OPERATION!

RODGERS PLATEN PRESS forms 220 tackle box bottoms per hour with a single draw 5½" deep and retains the leather-grained embossed pattern without distortions or fractures.

This strong, lightweight, rust-proof and moisture-proof aluminum fishing tackle box is the new Model 1000, made by the UMCO Corp. of Minneapolis, Minn.

A Rodgers 100 Ton Platen Press was chosen by UMCO because of its extremely smooth, efficient operation. The bottom, 18" long, 9" wide, is drawn 5½" in depth—the top is formed in one draw and cut apart—the carrier band is also formed in a single operation. Material is 18 gauge, leather-grained, embossed aluminum.

It requires a really smooth operating press to make these deep draws and still retain the original embossed pattern and turn out top quality production without fractures or scrap. Rodgers does it!

Rodgers Platen Presses are offered in capacities from 50 to 500 tons. Write for more information to suit your operations.

Light, rust and moisture-proof aluminum tackle box having 53 plastic lined compartments, by UMCO.

Model 1000 UMCO tackle box puts lift at bottom—where it belongs.

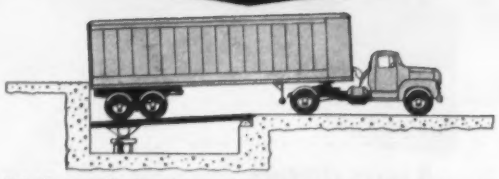
Rodgers Hydraulic Inc.
7425 Walker Street • Minneapolis 26, Minnesota

HI-PRESSURE Rodgers HYDRAULICS

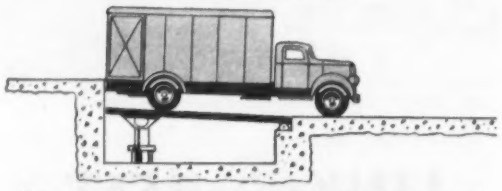
▲ For more details circle NED-367 K7 on enclosed inquiry slip ▲

Rotary TRUCK LEVELER

saves dock space • speeds loading



High truck beds are lowered to dock level



Low truck beds are raised to dock level

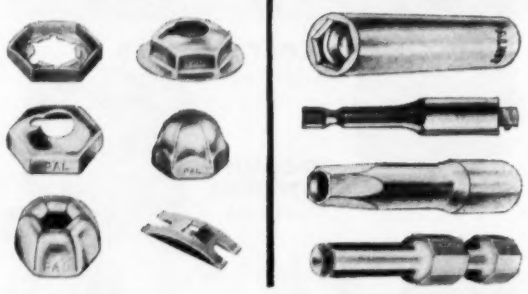
The Rotary Truck Leveler, using economical hydraulic power, handles any highway carrier at any dock. Easily installed at new or existing buildings. Write for catalog RE-800.

ROTARY LIFT CO., 1099 Kentucky, Memphis 2, Tennessee

▲ For more details circle NED-368 K7 on enclosed inquiry slip ▲

High-speed Assembly Method!

PALNUT LOCK NUTS PLUS PALNUT SOCKET WRENCHES



RESULT: Vibration-proof assemblies, with big savings in assembly time and cost

Specially-designed PALNUT magnetized socket wrenches and shanks for all standard power and manual tools, permit picking up, starting and tightening in one high speed operation. No fumbling with hand starting. Fast, uniform tightening.

WRITE FOR CATALOG and folder showing PALNUT assembly methods

THE PALNUT CO.
Subsidiary of United-Carr Fastener Corporation
45 Glen Road, Mountainside, N. J.
In Canada: P.L.Robertson Co., Ltd., Milton, Ont.

PALNUT TRADEMARK **LOCK NUTS**

▲ For more details circle NED-369 K7 on enclosed inquiry slip ▲

it IS possible to buy

FINE QUALITY CARBIDE TIPPED SAWS

at popular prices!

MEYCO MAINLINE **UNI-CHIP GRIND**

MAINLINE MEANS . . .
a saw blade engineered for tungsten carbide, built to high quality standards for top flight performance—priced at a level to compete with so-called low priced saws. "MAINLINE" also means a COMPLETE line . . . saws for ripping, precision, for all purpose work, and metal cutting, from 6" to 16" diameters and with different numbers of teeth.

UNI-CHIP MEANS . . .
a tooth design (as indicated to the left) with alternating double-beveled and straight raker teeth so the strong bevel teeth can do the heavy cutting and the following straight raker teeth can finish a cut to desirable smoothness.

"MEYCO" MEANS . . .
a lifetime of reputation in the field of making precision cutting instruments, a name that can be depended upon for quality—regardless!

MAINLINE saw catalog available on request. Ask for catalog No. 69

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle NED-370 K7 on enclosed inquiry slip ▲

INDUSTRIAL WIRE CLOTH

• REYNOLDS WIRE DIVISION of the National-Standard Company produces industrial wire cloth in standard and special weaves in a complete range of meshes, metals, alloys and coatings . . . in all normally required widths.

Write to Reynolds for specific information on the products we make and on our facilities for developing special wire cloth to fit your specifications.

Reynolds Wire Division • Dixon, Illinois

NATIONAL STANDARD

▲ For more details circle NED-371 K7 on enclosed inquiry slip ▲

PROPELLAIR®

. . . built to solve your "heavy duty" ventilating problems

. . . mount in any position

Heavy duty Propellair Type "CD" fans are designed for versatility and rugged duty. They can be mounted in side walls, roof ventilators, hoods, ducts and machinery in any position you require. They are ideal for "tough" ventilating jobs like removing heat, moisture, smoke and dust laden air. You get greater efficiency and quieter operation, because the exclusive venturi entrance ring prevents wasteful recirculation. The rigid, cast aluminum, precision balanced air-foil propeller runs quieter and retains its clean aerodynamic characteristics at all operating pressures. Powered by dependable Robbins & Myers Motors of any design you need, they are covered by a single name-plate guarantee. Available in sizes from 12" to 60" for from 1020 to 85000 CFM air delivery. Let Propellair engineers survey your needs and recommend the correct ventilating equipment.

WRITE FOR BULLETIN NO. 690-N

R&M PROPELLAIR®

DIV. OF ROBBINS AND MYERS, INC. SPRINGFIELD, OHIO

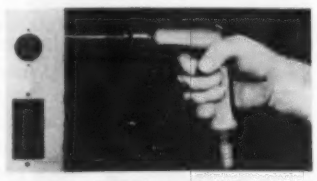
Certified Ratings PMA

MAN COOLER SKY-BLAST VANEAXIAL TUBEAXIAL EXTENDED SHAFT

MOVING AIR IS OUR BUSINESS

▲ For more details circle NED-372 K7 on enclosed inquiry slip ▲

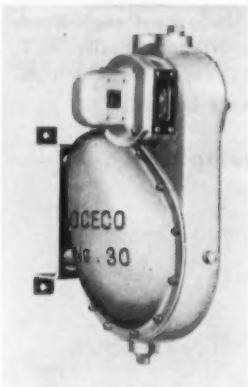
PNEUMATIC DRILL
3/16-in. size has Jacobs key chuck



Only 5 in. long and weighing 21 oz, the 3/16-in. model 300 pneumatic drill operates at up to 5000 rpm. It is suitable for drilling aluminum and nonferrous materials. Spindle thread is 5/16 in.-24. Pistol grip handle makes accurate drilling and easy handling possible. Distance from side of drill to center of spindle is 11/16 in. Made by **Airetool Mfg. Co.**, 308 S. Center St., Springfield, Ohio.

▲ For more details circle NED-373 K7 on enclosed inquiry slip ▲

TANK GAGE
indicates level accurate to 1/16-in.



Dependable, accurate reading of level in storage tanks is provided by this No. 30 tank gage. Adaptable for remote reading, gage operates with minimum of friction, compensates for weight of tape mass, mounts on side of tank, and uses Neg'ator stainless steel spring to counterbalance the float. Instrument is corrosionproof, easily installed, and has provision for checking operation of the float and tape mechanism. Indicator is graduated in feet, inches, and 1/16 inch. Made by **Johnston & Jennings Co.**, Oceco Div., 6907 Bessemer Ave., Cleveland 27, O.

▲ For more details circle NED-374 K7 on enclosed inquiry slip ▲

CLAMP-ON VOLT-AMMETER
has 5, 15, 40, and 100-amp ranges

Added to Amprobe line is this RS-2 model snap-around volt-ammeter which differs from its prototype model RS-1 in that it has a 300-v instead of a 600-v scale. This change provides greater accuracy for servicemen and troubleshooters who work with 220 v every day. Unit also has a 150-v range and current ranges of 5, 15, 40, and 100 amp which are selected by a flick of the thumb. Other features include magnifying-glass covered dial, longer needle sweep, a needle lock to retain reading taken in a difficult location, simple bayonet voltage leads, impactproof case, printed circuits, and shielded core magnet movement. Fitted leather case hooks onto belt. Price is $39.85. Made by **Pyramid Instrument Corp.**, Dept. NED, 630 Merrick Rd., Lynbrook, N. Y.

▲ For more details circle NED-375 K7 on enclosed inquiry slip ▲

CIGARS-CIGARETTES-MATCHES

immediately extinguished... with SIPCO DUNKING STATIONS

Fire hazards from smoking are a problem everywhere.

Stop fires before they start . . . with SIPCO DUNKING STATIONS. Heavy CAST ALUMINUM CANISTERS — guaranteed three years against breakage. Partly filled with water, they drown the "smoke" and solve the sanitation problem. Lift off the canister — flip back the lid — dump it and the cleaning job is done!

Available in over a dozen different models. STANDARD and JUMBO sizes — with either black crinkle or brightly polished DELUXE finish to suit your own requirements.

Unit No. 1J—JUMBO floor model with heavy weighted base and attractive, eye catching metal sign. Height 42". Wt. 26 lbs. ALSO AVAILABLE . . . A DELUXE FLOOR MODEL, LESS SIGN AND DECAL, for hospitals, waiting rooms, offices, restaurants, stores, etc.

Unit No. 2J—JUMBO canister and sign. For mounting on walls, posts, columns or machines. Wt. 6 lbs.

Unit No. 3J—(not illustrated) JUMBO canister with mounting bracket but less sign. Wt. 3½ lbs.

WRITE FOR ILLUSTRATED BROCHURE

STANDARD INDUSTRIAL PRODUCTS CO.

DEPT. D • 920 N. GARFIELD AVE. • PEORIA, ILLINOIS

▲ For more details circle NED-376 K7 on enclosed inquiry slip ▲

▲ For more details circle NED-377 K7 on enclosed inquiry slip ▲

DIE CUSHIONS

FOR ALL DEEP DRAWING OPERATIONS

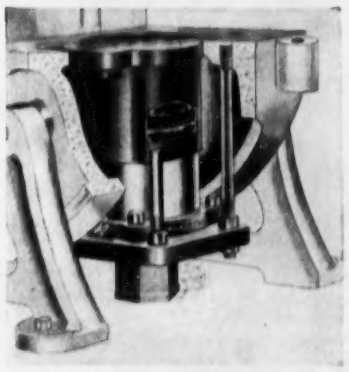
Furnished complete ready to install. Operates perfectly on all shop air lines.

•

ACCURATE ADJUSTABLE WORKING PRESSURES ASSURED
QUICK SETUP SAVES TIME
PRESS BED OR BOLSTER PLATE MOUNTING
17 MODELS AVAILABLE FROM STOCK, SIZES 3" THRU 16"

•

DIE CUSHIONS AVAILABLE FOR ANY POWER PRESS
ENGINEERING SERVICE AT YOUR DISPOSAL
ALL DIE CUSHIONS INSTALLED ON TRIAL BASIS



Full Universal Pneumatic Die Cushion

DAYTON ROGERS *Manufacturing Company*

MINNEAPOLIS 7E, MINNESOTA

▲ For more details circle NED-378 K7 on enclosed inquiry slip ▲

For Short Cuts and Savings
in Engineering Drawing Reproduction

Kodagraph Reproduction Materials eliminate tedious retracing . . . produce better shop prints . . . simplify print production. Whether you make your own prints or use a blueprint, it will pay you to know them.

Kodagraph Negative Paper gives you positive photographic intermediates directly from blueprints and other negatives.

Kodagraph Contact Paper produces outstanding negatives in contact photocopy printers.

Kodagraph Autopositive Papers and Film produce positive photographic intermediates without a negative step; can be exposed in standard printmaking equipment . . . processed in standard photographic solutions. Fast, easy roomlight handling!

Kodagraph Projection Papers give you highest quality enlargements from microfilm or other reduced-scale negatives.

Write today for free booklet

Kodagraph Reproduction Materials

EASTMAN KODAK COMPANY
Graphic Reproduction Division
Rochester 4, N. Y.

Kodak

▲ For more details circle NED-379 K7 on enclosed inquiry slip ▲

PUMP FLUIDS FROM DRUMS

Faster, Cleaner . . . with the All-Purpose

ALEMITE DRUM PUMP

Fully adjustable air operated delivery of any fluid and semi-fluid material! No mess or waste! No pressure in drum! Adjustable bung adapter fits any drum up to 55-gal. size . . . original drum remains sealed.

For lubricating oil, cutting oil, fuel oil • Pressure gun grease • Alcohol • Asphalt emulsions • Benzine • Carbon tetrachloride • Ethylene glycol • Gasoline Lacquer thinner • Shellac Kerosene • Vegetable oils Alemite Model 7216-A.

Write for free catalog and complete information to:
Alemite, Dept. HH107, 1850 Diversey Parkway, Chicago 14, Illinois

ALEMITE STEWART SW WARNER

Division of STEWART-WARNER CORPORATION

For more details circle **NED-380 K7** on enclosed inquiry slip

LERMER Containers:

- are shatterproof, assuring long life.
- are 75% lighter than glass, effecting enormous savings in shipping.
- are available clear or opaque in a multitude of lustrous colors.
- can be handsomely decorated and printed during manufacture to carry your story.

Write for complete catalog.

LERMER PLASTICS, INC. 514 South Ave. Garwood, N. J.

REPRESENTATIVES IN THESE CITIES: Rochester, Philadelphia, Memphis, Miami, Cincinnati, Columbus, Cleveland, Chicago, Detroit, Minneapolis, San Francisco, Los Angeles.

PIONEERS AND SPECIALISTS IN PLASTIC CONTAINERS

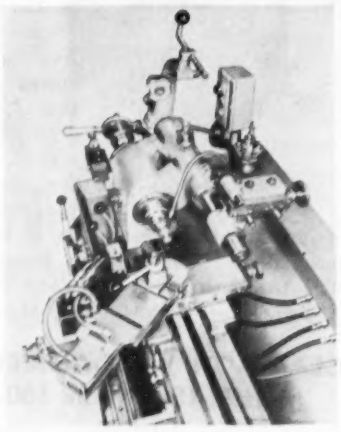
For more details circle **NED-381 K7** on enclosed inquiry slip

V-NOTCHING PUNCH
handles up to 1/8-in. mild steel

Both angle and sheet material equivalent to and including mild steel up to 1/8-in. thick can be notched by Unipunch series B 90-degree Vee Notching Units. The self-contained units are set up on templates, T-slotted plates, or rails in presses and bress brakes. They can be grouped at any desired distance in unlimited notching arrangements on up to three edges of sheets or along the edge of angles for multiple notches with each stroke of the press ram. Angles can be notched flush to inside leg. The one-piece casting holds punch and die in perfect alignment. Units are available in two sizes for maximum 1 and 1½-in. deep vees. Made by **Punch Products Corp.**, 3808 Highland Ave., Niagara Falls, N. Y.

For more details circle **NED-382 K7** on enclosed inquiry slip

TRACER LATHE
uses flat or round templates



Parts are duplicated with accuracy as close as 0.0003 in. by this improved tracer lathe which uses either flat or round templates. Machine has push-button starting for automatic carriage and spindle cycling, and pushbutton stop of automatic cycle which returns carriage to starting position with tool and stylus retracted. Motor direction and speed are controlled by spindle drive control levers mounted near the head stock control. Spindle speeds can be from 120 to 2900 rpm. Longitudinal feed is controlled by a lever on the control panel. It actuates a pressure-compensated valve regulating the carriage feed rate. Made by **Elgin Tool Works, Inc.**, Dept. P, 1770 Berteau Ave., Chicago 13, Ill.

For more details circle **NED-383 K7** on enclosed inquiry slip

Vinyl Coatings

Amercoat Corp.—Three illustrated bulletins 33Hb, 35, and 88 describe High Build vinyl, decorative vinyl, and masonry coating vinyl finishes respectively. These coatings provide protection against moisture, weather, acids and alkalies, abrasion and other deteriorating factors. They are designed for building and structural maintenance.

For more details circle **NED-384 K7** on enclosed inquiry slip

New midget tools for high speed precision grinding

AIRETOOL
PNEUMATIC DIE GRINDERS

Perform the most intricate portable grinding jobs quicker and easier with these lightweight, easy-to-hold, air-powered grinders. They operate with a wide range of grinding and filing tools . . . have plenty of speed and power for fast, smooth cutting of hardened steels.

Airetool Midget Grinders are vibration free . . . quiet running . . . won't heat up. Ball bearing thrust and spray lubrication assures long trouble-free service.

Send for details on Airetool Pneumatic Tools: Midget Grinders, Horizontal and Vertical Grinders, Drills, Screwdrivers and Nutrunners.

Model 200
60,000 R.P.M.
5/16" dia. x 4 7/8" long
Wt. 4 oz.

Model 300 →
38,000 R.P.M.
1 3/16" dia. x 5 3/4" long
Wt. 12 oz.

Over 27 years experience in pneumatic motor equipment.

Airetool offices and representatives in principal cities of U.S.A., Canada, Mexico, Puerto Rico, South America, England, Europe, Italy, Hawaii, Japan.
Canadian Plant: 37 Spalding Drive Brantford, Ontario
European Plant: Vlaardingen, The Netherlands

AIRETOOL MANUFACTURING COMPANY SPRINGFIELD, OHIO

For more details circle **NED-385 K7** on enclosed inquiry slip

The Sign of **QUALITY** MOTOR CONTROL

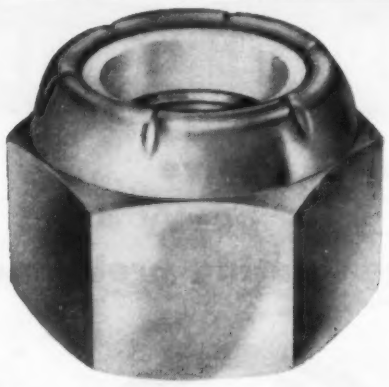
These Dependable Starters for Small Motors provide accurate overload protection

A-B Bulletin 600 starting switches are designed for all types of "industrial service." The snap-action single or double pole switch mechanism is ruggedly built to assure long, trouble free operation. Accurate thermal breakers—which prevent switch being held closed during overload—protect motors against burnouts. Available in single or double units, or in combination with pilot light or selector switch in various NEMA enclosures. Send for A-B Bulletin 600.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wis.
In Canada—
Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
QUALITY

For more details circle **NED-386 K7** on enclosed inquiry slip



What size is a quality fastener?

Here are two ELASTIC STOP® nuts. Each has the familiar red locking collar.* Each is self-locking, vibration proof and reusable. Both stop nuts will maintain an accurate adjustment anywhere on a bolt . . . each prevents liquid seepage along bolt threads and protects against thread corrosion. Finally, each has an unmatched record for quality, both in manufacture and performance.

But . . . one measures 1/10" across the flats; the other, 4". Between these two there are more than 530 different hex nuts in the ESNA line. Look to ESNA for a *standard* self-locking fastener to fit your *special* needs. Write Dept. S2-1053.

**The red locking collar is a Registered Trade Mark of ESNA*

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, New Jersey

For more details circle **NED-387 K7** on enclosed inquiry slip

CUT COSTS OF "FACTORY WATER"

● Savings up to 60% on costs of water are made by many manufacturers who installed Deming Vertical Turbine Pumps. Standardized unit parts are assembled to make the complete pumps.

Installation is simple. Operating and maintenance costs are economical. A wide selection of sizes, types of drive and range of capacities are available. Send for . . .

FREE BULLETINS...

BULLETIN 4700-A features *Water Lubricated* type of Deming Turbine Pumps. BULLETIN 4750 features the *Oil Lubricated* type. Send for either or both bulletins.

THE DEMING CO.
520 Broadway
SALEM, OHIO

For more details circle **NED-388 K7** on enclosed inquiry slip

ANOTHER *PANNIER* MASTER MARKER!

PANNIER'S ALL-NEW SUPER INK PRINT-ALL

Internally fed unit.
Use inks from semi-paste to liquid, including light colored, heavy pigmented inks.
Continuous or repeat printing.
No stopping to add ink.
Print on 1" centers with multiple staggered units.

Super Ink Print-All clearly marks all conveyed materials traveling horizontally or vertically. It prints top or bottom surfaces as material moves under or over the printer.

Write for complete data.

BIRTHMARKED MATERIALS

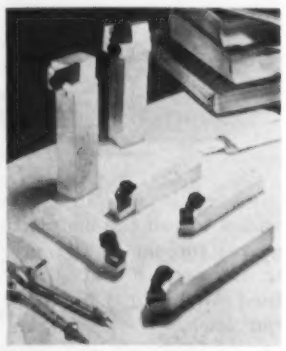
MARKING DEVICES — MASTER PANNIER MARKERS

THE PANNIER CORPORATION

301 Pannier Building • FAirfax 1-5185 • Pittsburgh 12, Pa.
Offices: Los Angeles • Chicago • Cleveland • Philadelphia

For more details circle NED-389 K7 on enclosed inquiry slip

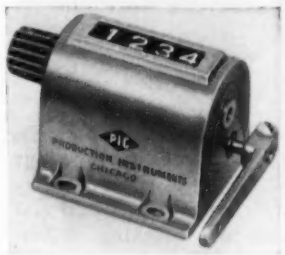
CARBIDE TOOL HOLDER clamp speeds chip clearance



An improved clamp which has positive gripping action and gives greater chip clearance is featured by this tool holder for cemented carbide indexable inserts. Clamp can be used with or without chip breaker, and its screw is accessible from both top and bottom of the holder. All of more than 116 holder styles and sizes utilize the new clamp. Photo shows six of these styles. Made by **Allegheny Ludlum Steel Corp.**, Carmet Div., Dept. NED, Ferndale, Mich.

For more details circle NED-392 K7 on enclosed inquiry slip

SMALL STROKE COUNTER is manual-reset four-digit unit



Adaptable to a wide range of counting operations, PIC Junior King reset, four-digit stroke counter has diecast case and chrome plated finish. Mounting holes in the case prevent tampering without dismounting of unit. It counts to 9999, resets to zero with one turn of knob, and has white numerals on black background. Top-coming or top-going arm action is provided with either right or left shaft extension. Made by **General Controls Co.**, Production Instruments Div., 8066 McCormick Blvd., Skokie, Ill.

For more details circle NED-393 K7 on enclosed inquiry slip

FOUR-CYCLE ENGINE develops 24 hp at 3200 rpm

Weatherproof steel housing of model K660G four-cycle air-cooled engine adapts it to industrial and field use where protection from the weather is important. The short-stroke unit has two opposed cylinders and develops 24 hp at 3200 rpm. Blower and housing are designed with baffles directing a large volume of cooling air around the finned cylinder and head area. Engine is equipped with rainproof, silencer-type muffler, has gear-type lubrication, and comes with or without 5½-gal fuel tank. Made by **Kohler Co.**, Dept. 2, Kohler, Wis.

For more details circle NED-394 K7 on enclosed inquiry slip

FREE LATEST STAYNEW FILTER INFORMATION

Complete engineering and application data on all Staynew Filters is yours for the asking. Be sure to specify Bulletin Number.

INTAKE FILTERS Bulletin 100
PIPE LINE FILTERS Bulletin 200
LIQUID FILTERS Bulletin 300
AUTOMATIC FILTERS Bulletin 500
DRY TYPE FILTERS Bulletin 600
VISCOUS PANEL FILTERS Bulletin 700
ELECTROSTATIC FILTERS Bulletin 400

ALL STAYNEW FILTER INSERTS, like the radial fin type illustrated, are easily cleaned, easily replaced for continuous, efficient filtration at low cost.

Special filters are also available . . . consult your local Dollinger representative. Dollinger Corporation, 49 Centre Park, Rochester 3, N.Y.

PROTECTOMATIC STAYNEW FILTERS — DOLLINGER — FILTERS FOR EVERY INDUSTRIAL NEED

For more details circle NED-395 K7 on enclosed inquiry slip

ALLFLEX

stainless steel *FLEXIBLE* connectors

NEW STOCK SOLUTION TO ALL PIPELINE PROBLEMS.

- Dampens Vibration
- Compensates For Misalignment
- Permits Offset Movement
- Absorbs Expansion

Now available in these standard stock sizes & lengths:

Stock Sizes	Stock Lengths
¼"	12"
⅜"	18"
½"	24"
¾"	30"
1"	36"
1¼"	48"
1½"	
2"	

The corrosion, heat and pressure resistance of Stainless Steel *ALLFLEX* Connectors will solve all pipeline problems caused by too rigid connections. One piece construction with standard pipe threaded fittings gives *FLEXIBILITY plus* — in installing and in longer service life. SAME DAY SHIPMENTS!

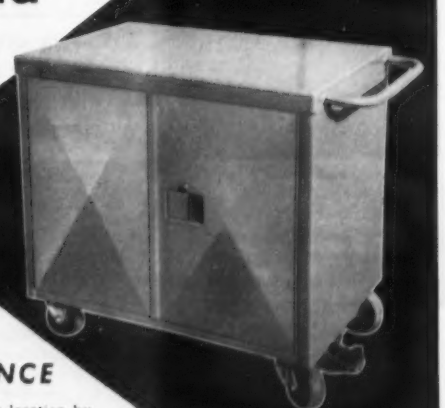
Write for full information.

ALLIED METAL HOSE COMPANY

3788 NINTH STREET
LONG ISLAND CITY 1, NEW YORK

For more details circle NED-390 K7 on enclosed inquiry slip

This new mobile workbench is an open and shut case



for *FAST EFFICIENT MAINTENANCE*

NOW . . . a workbench that can be rolled to work location by one man . . . with adequate space for tools and spare parts, lock-equipped doors plus an ample surface working area.

All-welded 1/8-inch and 3/16-inch steel plate constructed, the ROLL-A-BENCH is capable of supporting up to 2000 pounds. Heavy-duty roller bearing wheels (hard rubber or phenolic resin) are furnished. A foot-operated locking mechanism assures stable working surface. Vise optional.

Write today for literature and prices or . . . CALL MOntrose 2-4242.

7359-OK

the Overbeke-Kain Company

THE OVERBEKE-KAIN COMPANY

20979 Aurora Road • Bedford, Ohio

For more details circle NED-391 K7 on enclosed inquiry slip

WANT THE Handiest Adhesive FOR YOUR SHOP?

Stick with the one that has—

—The Bond-Ability

to solve practically *any* industrial problem — no matter what materials you have to join.

—The Strength of Ten Men

to give you permanently satisfactory jobs—resists a pull of up to 1,500 pounds per square inch.

—The Easy Use

that makes child's play of even the toughest bonding work — saves you time and effort.

AVAILABLE from industrial jobbers or mill supply houses everywhere or write: Goodyear, Chemical Division, Coatings Dept., Akron 16, Ohio, for full information.

Pliobond BY GOODYEAR

"BONDS ANYTHING TO ANYTHING"

Pliobond—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-396 K7 on enclosed inquiry slip

NO EQUAL THE WORLD OVER!

the HANSEN line of Automatic Tackers—

SAVE TIME AND STEPS in tacking—

- Upholstery
- Shelving
- Screens
- Posters
- Rugs
- Material
- Labels
- Insulation
- Decorations

. . . a versatile tool with 1001 uses!

HANSEN High Speed Automatic Tackers are recognized the world over for their superiority in design . . . lightweight, sturdy construction . . . and dependable, trouble-free service.

36 models with 80 staple sizes make HANSEN the most advanced and complete line. Select the type especially designed for your specific need.

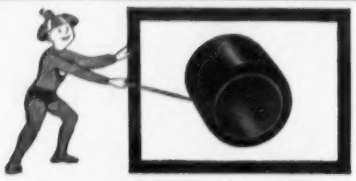
Write for booklet

BE SURE IT'S A HANSEN ORIGINAL

A. L. HANSEN mfg. co. 5164 RAVENSWOOD AVE. CHICAGO 40, ILLINOIS

75571

For more details circle NED-397 K7 on enclosed inquiry slip



Mr. Hi Frequency

White line indicates hardened steel. Black wrapper was used in photo to emphasize .060 case depth.

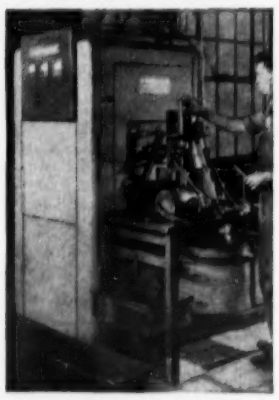
Boosts Bolt Sales 300%

for JAMBOR TOOL AND STAMPING COMPANY

Jambor was making top-grade, long wearing king bolts but . . . the bolts were "file soft."

To remedy the situation, Jambor switched to higher carbon steel and surface-hardened the bolts with Allis-Chalmers electronic induction heaters. Results were amazing. Sales went up 300 percent. Material costs dropped 10 percent.

It could happen to you. If you harden, anneal, solder, braze or melt, chances are Allis-Chalmers induction heaters can do the job better, faster, more economically. For complete information, see your A-C representative or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.



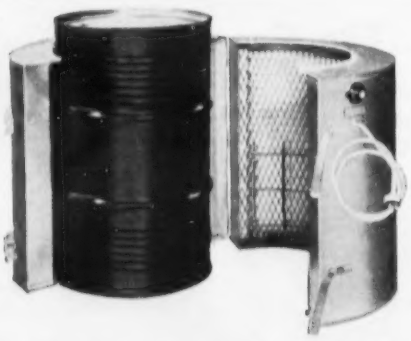
Allis-Chalmers has also supplied a number of work coils and quench blocks for a variety of jobs.

ALLIS-CHALMERS

A-5433

For more details circle NED-398 K7 on enclosed inquiry slip

WARMS ANYTHING IN METAL DRUMS UP TO 450° F



If your operations call for the removal from steel drums of any material that handles better when warm, a

PALMER AUTOMATIC DRUM WARMER WILL SAVE TIME AND MONEY

A portable electric oven that operates automatically and economically at the point of use.

Four models—for 55 and 30 gallon and 16 and 14 gallon (120 and 100# grease) drums. Supplied for 115, 208, 230 or 460 volt, single or three phase.

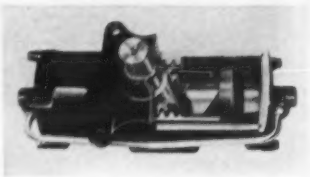
Write Dept. 48 today for literature, specifications and prices.

HAROLD L. Palmer COMPANY

2980 W. Davison Ave., Detroit 38, Mich. TUlsa 3-1100

For more details circle NED-399 K7 on enclosed inquiry slip

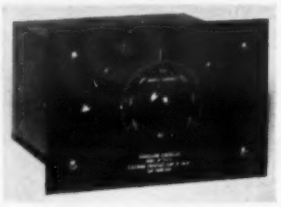
ROTARY MOTION CYLINDER uses hydraulic or pneumatic power



Operating at from 600 to 1000 psi, this rotary motion power cylinder delivers about 26,000 lb-in. torque. It can be used wherever hydraulic or pneumatic pressure is available. Degree of rotation can be varied to suit the installation. Over-running clutches, gears, sprockets, and other devices can be adapted to the output shaft. Made by **Thompson Products, Inc.**, Michigan Div., 34201 Van Dyke Ave., Warren, Mich.

For more details circle NED-400 K7 on enclosed inquiry slip

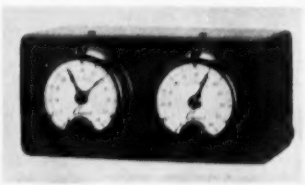
TEMPERATURE CONTROLLER is of proportioning type



Temperatures of industrial processes can be precisely controlled by means of this proportioning type model T-157 Ectotherm controller. Temperatures are maintained through measuring the medium being heated, and modulating the power to the heater so that the average power input is equal to the loss. There is a minimum of overshooting during the warm-up. Large calibrated dial facilitates temperature setting and checking. Completion of the heat cycle is indicated by alternate flashing of a red and green light. Plug-in construction simplifies maintenance. Made by **Electronic Processes Corp. of Calif.**, Dept. NE, 2190 Folsom St., San Francisco 10, Calif.

For more details circle NED-401 K7 on enclosed inquiry slip

DUPLEX CYCLING TIMER has two motor-driven timers



Operation of process equipment, regulation of both idle and operating time on production machinery, or automatic operation of many plant functions can be controlled by the type 742 duplex cycling timer. It incorporates two independently adjustable, standard 412, motor-driven automatic reset timers, each of which provides a timed interval or delay. Each load switch has a repeat accuracy of 99¾ per cent and a rating of 15 amp, 125 v, noninductive. Instrument operates on 115 or 220 v, 50 or 60 cycles. Standard time ranges include 11 choices from 6 seconds to 24 hours. Timer can be specified for control of alternating or direct current. Size is 9⅛ x 4½ x 5 in. Made by **Cramer Controls Corp.**, Box 281, Centerbrook 5, Conn.

For more details circle NED-402 K7 on enclosed inquiry slip

You asked for it . . .

KNU-VISE has come up with it!

TWO NEW AIR-OPERATED CLAMPS with 800 pound clamping force

AO-800 CLAMP

AODT-800 DOUBLE TOGGLE CLAMP

Because you asked for it, Lapeer's vast line of Knu-Vise clamps now features four distinct groups of air-operated clamps. Two new 800 lb. air clamps have been added to the widely accepted 200, 400 and 1200 lb. air clamps, thereby rounding out the Knu-Vise series. The Model AO-800 clamp is for conventional holding operations—the Model AODT-800 for those difficult mounting situations.

For complete information on these units and the more than 150 other models available, write for catalog today!

Manufacturers of over 150 models of manually and air-operated clamps and pliers

KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.

3062 DAVISON ROAD • LAPEER, MICHIGAN

WESTERN DIV. 422 Magnolia, Glendale, Calif. • CANADIAN DIV.: Higginson Equipt. Sales Ltd., Hamilton, Ont.

For more details circle NED-403 K7 on enclosed inquiry slip

MARSHALLTOWN

ROTARY THROATLESS SHEARS

Capacities from 18 Gauge to ½"

Cuts any SIZE . . . any SHAPE

America's finest for every cutting job—straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

Built for extra heavy duty use. High grade tool steel cutters.

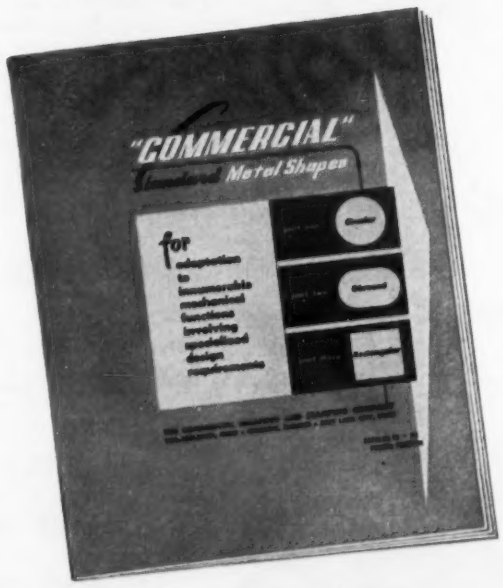
Write today for details and prices.

MARSHALLTOWN MFG. CO., Marshalltown 2, Iowa

For more details circle NED-404 K7 on enclosed inquiry slip

HOW TO AVOID TOOL & DIE COSTS!

Hundreds of standard metal shapes offered from Commercial's "Die-Bank"



FREE CATALOG INCLUDES COMPLETE SPECS & DRAWINGS

For greater uniformity and accuracy all shapes are produced by cold forming workable metal in Commercial's dies made up from over 2,315 basic die components. Commercial also offers facilities for drilling, boring, machine trimming, burning and welding.

Custom Stampings Available

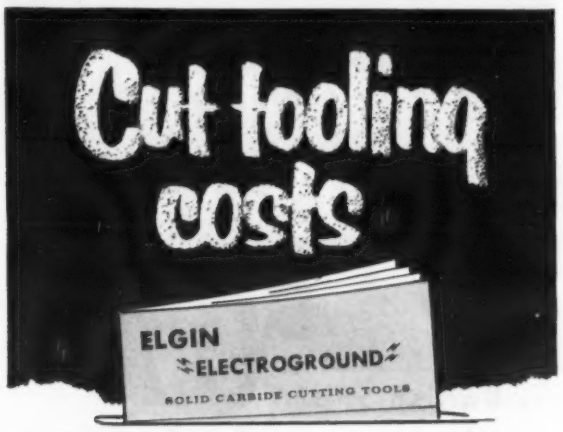
Complete engineering and design assistance, modern presses with capacities up to 2000 tons, plus our own completely integrated tool and die making service, are geared to economically produce large or small run, medium and heavy stampings to meet your exact requirements.

COMMERCIAL shearing and stamping

Youngstown 1, Ohio

For more details circle NED-405 K7 on enclosed inquiry slip

Cut tooling costs

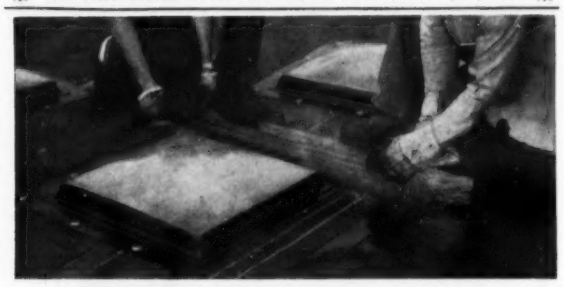


Elgin's new, informative catalog shows you how to get positive results in cutting tooling cost. It shows the complete Elgin Golden Circle line of solid carbide end mills, drills, reamers and burs—in stock for immediate delivery. Read how "Electro-Grinding" eliminates checked, chipped or flaked cutting edges caused by the strains and high temperatures of other production methods.

Write today... get the whole "Golden Circle" story.

Abrasives Division
ELGIN NATIONAL WATCH COMPANY
Dept. 1 ELGIN, ILLINOIS

▲ For more details circle NED-406 K7 on enclosed inquiry slip ▲



This One-Piece Skylight CAN'T LEAK!

Self-flashing double-dome Consolite is the ideal skylight. Compare any other against the following Consolite features:

- **leak-proof:** One piece fiberglass units, including flashing, eliminates possibility of leaks.
- **no condensation:** Double-dome construction, with dead air space between, means no condensation drip and high insulation value.
- **simple to install:** Nailed through its flashing, Consolite is simply bonded to the roof with felt stripping and pitch. Skylights available for any roof: built-up, pre-stressed concrete or bonded.
- **maintenance-free:** There's nothing to rust or corrode. Fiberglass material is unaffected by normal industrial fumes. Self-cleaning domes are shatter-proof and crack-proof.
- **natural light diffusion:** Consolite transmits approximately 80% of visible light, but diffuses harsh sun glare and reduces eyestrain.

For complete information, sizes and prices, write:

RESOLITE CORPORATION
Box 527, Zelienople, Pa.

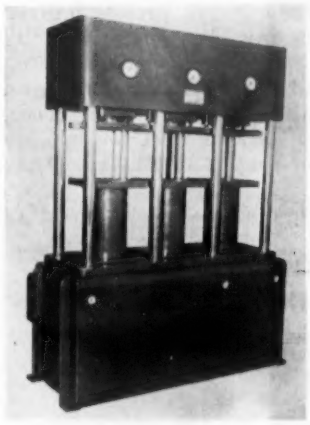
▲ For more details circle NED-407 K7 on enclosed inquiry slip ▲

CRAYON HOLDER
has one-hand mechanical adjustment

Suited for various marking purposes, the Mark I pushbutton mechanical crayon holder has a knurled finger grip which prevents slipping. It will mark on wood, metal, glass, cement, plastic, and rubber. Holder will utilize the crayon almost completely, holding it in a triple-clamp clutch. Colored barrel identifies crayon color. Made by **Alvin & Co.**, Palisado Ave., Windsor, Conn.

▲ For more details circle NED-409 K7 on enclosed inquiry slip ▲

HYDRAULIC MULTIPLE PRESSES
have one to four 50-ton sections



Operating directly from shop compressed air, multiple hydraulic presses are suited for rubber, plastic, or ceramic molding. Offered with one to four sections, each rated 50 tons and having 13 x 13-in. platens, presses have ram strokes and daylight openings of 13 in. They can be equipped with heated platens with a controlled temperature range of 150 to 550° F. Use of multiple stations provides for staggering the curing cycles. Made by **Allied Engineering & Production Corp.**, 2421 Blanding Ave., Alameda, Calif.

▲ For more details circle NED-410 K7 on enclosed inquiry slip ▲

REMOTE VALVE POSITIONER
meter indicates valve position

Upper and lower valve limit signals plus meter indication of valve position are provided by the Val-Con electrical control for remote valve positioning. It operates over leased lines or standard two-wire and ground systems. Controlled valve position, or other process variable dependent on valve action, is displayed on a 6-in. meter. Two independent visual alarms are included for power failure, pressure, temperature, and overload, and an audible alarm unit can be attached. Supervisory control unit is housed in a NEMA 1 enclosure, or is available for panel mounting. Remote controller is offered with the same mounting options. Made by **Sparton Corp.**, Sparton Controls System Div., 223 S. Horton St., Jackson, Mich.

▲ For more details circle NED-411 K7 on enclosed inquiry slip ▲

EVERY ENGINEER will want a copy of this BULLETIN

WRITE FOR BULLETIN 213. Complete details and mounting dimensions on Hannifin Series "A" Square Type Fluid Power Cylinders, usable up to 200 psi, air or oil. This is the cylinder with the new, externally removable cartridge gland...the biggest improvement in cylinder design in the last 50 years. The "A" line is complete! 11 bore sizes from 1½" to 14"—13 standard mountings, many combinations. Steel heads. Brass bodies. Piston rods ground, polished and hard chrome plated. Send for Bulletin 213. It's the easiest catalog to use in the cylinder business.

HANNIFIN
Hannifin Corporation, 527 S. Wolf Road, Des Plaines, Ill.
Air and Hydraulic Cylinders • Presses • Air Control Valves

▲ For more details circle NED-412 K7 on enclosed inquiry slip ▲

How to get more storage space with BLAW-KNOX Electroforged® Steel Grating

You can get additional badly needed storage space easily and economically in your present building simply by installing platforms of Blaw-Knox Grating. It fits easily, neatly around pipes, beams and machinery without any alterations to your building.

Maintenance costs are slashed in the bargain. There's nothing to wear, nothing to patch. Blaw-Knox grating is self-cleaning too. No sharp corners to clog up with dirt, and you'll find painting is easy since all surfaces are easily accessible.

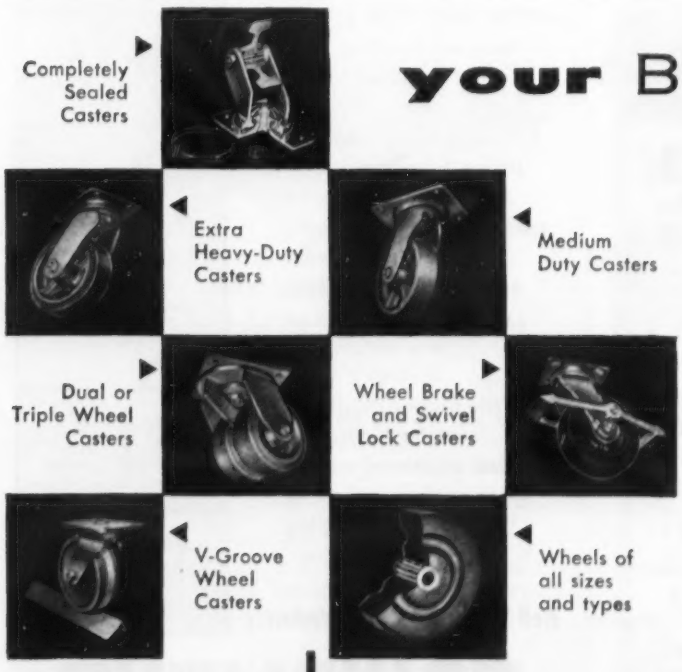
You get maximum open area for plenty of light and ventilation. What's more, its rigid one-piece construction means maximum structural strength and load bearing capacity.

Blaw-Knox Electroforged Grating for walkways, stair treads and floors is fabricated to your specifications to meet your own operating requirements. Complete data on all types is contained in Bulletin 2527. Write for your copy today.

BLAW-KNOX COMPANY
Equipment Division
Dept. F, Pittsburgh 38, Pa.

▲ For more details circle NED-413 K7 on enclosed inquiry slip ▲

your BEST move!



ALBION *industrial...* CASTERS

Albion casters checkmate your materials handling problems. They are versatile, dependable, economical and available *right now*. Whether you need a caster for light, medium, heavy or extra heavy duty requirements—standard or special—Albion casters are the practical answer.

Albion casters are available in every conceivable range of Industrial size, type, capacity and desired wheel type to suit your needs.

Make the best move...get all the facts on Albion Casters today. Write, wire or phone for the information you need. Albion is always at your service.

Do it now... request your copy of the Albion Caster and Wheel catalog. Yours for the asking.

ALBION INDUSTRIES, INC.
Distributors in Every Strategic City
Main Plant: ALBION, MICHIGAN

▲ For more details circle NED-408 K7 on enclosed inquiry slip ▲

How to cut *runaway* crane rail budgets

You'll want to read this booklet. It's full of information on how to reduce crane rail maintenance budgets. In it you'll find full descriptions of a special method of rail-joint assembly, "floating rail" fastenings and three USS Special Crane Rail Sections which are designed for longest life under heavy wheel loads. Just write to United States Steel, Room 5613, 525 William Penn Place, Pittsburgh 30, Pa. Do it today.

USS SPECIAL CRANE RAIL SECTIONS

UNITED STATES STEEL

For more details circle NED-414 K7 on enclosed inquiry slip

EVERY

Abart

gear is custom-made

SPUR, SPIRAL, BEVEL, HELICAL, INTERNAL, WORM, RACK, SPROCKET, ETC.

We deliver to your exact specifications

Abart carries no stocks . . . every gear is precision-cut to order. Any type of gear . . . from any material, in any quantity. 96 D. P. to 5/7 D. P.—1/4" P. D. to 18" P. D.

Send B/P and specs or sample for estimate

WRITE FOR ABART GEAR BULLETIN

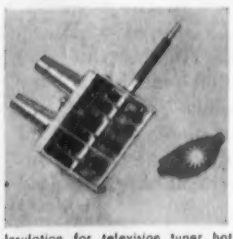
ABART GEAR and MACHINE CO.

4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

For more details circle NED-415 K7 on enclosed inquiry slip

This is the punchable laminated plastic with high insulation resistance. Resists high humidities.

Synthane XXXP-IR



Insulation for television tuner hot punched from Synthane Grade XXXP-IR

For the many electrical and electronic parts that require a *punchable* insulation of outstanding properties, Synthane Grade XXXP-IR fills the bill. A paper base laminate with high insulation resistance, low moisture absorption, low dissipation factor and low cold flow. Recommended for use under high humidity conditions and may be readily punched when heated. Insulation Resistance 50,000 megohms (96 hrs., 90% rel. humidity, 95°F), low moisture absorption, very low dissipation factor (0.030, 1 megacycle), and low cold flow.

SYNTHANE

SYNTHANE CORPORATION, N. E. River Rd., Oaks, Pa.

☐ Please send me promptly information about Synthane XXXP-IR

☐ I am interested in other Synthane Grades

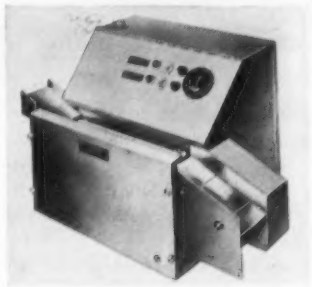
NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

For more details circle NED-416 K7 on enclosed inquiry slip

CHECK-WEIGHING SCALE for prefilled packages on the move



In-movement prefilled packages are check-weighed for overweight, underweight, or both by this electronic Package Classifier. Items move onto scale approach section by automatic conveyor, then continue over weighing section by means of motor-driven belt. A Micro Switch in this section actuates the electronic balancing mechanism. Package then moves onto take-away section where a diverting gate automatically drops rejected units out of the line. An over-under zero indicator provides visual check of item weight. Tolerance range is easily adjusted. Model 9450 shown handles package sizes up to 4½ x 2½ x 1 in. Classifiers are built in several sizes to meet job requirements. Made by **Toledo Scale Co.**, Telegraph Rd., Toledo 6, Ohio.

For more details circle NED-417 K7 on enclosed inquiry slip

SURFACE INSPECTION LIGHT for measuring flatness

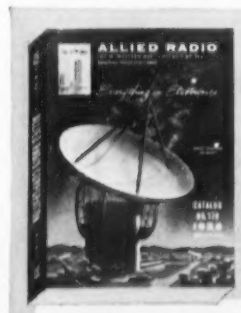
This Lapmaster monochromatic light is four times larger than the present model, and it facilitates checking surface flatness of larger workpieces. Light measures 11 x 14 in., and the work stage is 10 in. square. A 9000-v transformer provides an average of 40 foot candle power at the diffusing glass. The light head can be tilted and adjusted for height to give maximum light on the work area, or it can be swung around to check work placed on bench. Various optical flats are available for use with instrument. Made by **Crane Packing Co.**, Dept. NDC, 6400 Oakton St., Morton Grove, Ill.

For more details circle NED-418 K7 on enclosed inquiry slip

Visible Record Systems

Diebold, Inc., Systems Div.—The value of visibility in record keeping is theme of 16-page illustrated brochure AL 4330. Described is the Tra-Dex vertical visible record system, as well as equipment and accessories which adapt it for any business need. Key factor for control is automatically exposed on the vertical margin of Tra-Dex records as a by-product of each posting.

For more details circle NED-419 K7 on enclosed inquiry slip



FREE send for the most widely used ELECTRONIC SUPPLY GUIDE

ALLIED'S COMPLETE 404-PAGE 1958 CATALOG

send for it!

your buying guide to the world's largest stocks of ELECTRONIC SUPPLIES FOR INDUSTRY

- Receiving Tubes
- Power & Gas Tubes
- Diodes & Transistors
- Relays & Switches
- Test Instruments
- Meters & Supplies
- AN Connectors
- Metal Chassis Bases
- KNIGHT Public Address Systems

Simplify and speed your purchasing of electronic supplies and equipment at ALLIED. We make fast, expert shipment from the world's largest stocks of *everything* in Electronics. Manufacturers' prices available on quantity purchases. Send today for your FREE 1958 ALLIED Catalog—the *complete* Buying Guide to Electronic supplies for Industrial and Communications use.

One Complete Dependable Source for Everything in Electronics

ALLIED RADIO

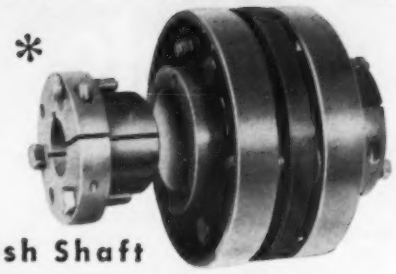
100 N. Western Ave., Dept. 37-K7 Chicago 80, Illinois

our 37th year

Send for FREE Catalog

For more details circle NED-420 K7 on enclosed inquiry slip

CLIMAX QD* FLEXIBLE COUPLINGS



Banish Shaft Misalignment Grief

Exclusive knob-disc coupling design requires no lubrication...unaffected by abrasives or dust. Split-taper bushing gives quick disconnect convenience with tight shaft fit.

REQUEST QD-71 BULLETIN FOR DETAIL!

**Split Taper "Quick Disconnect" Bushing*

CLIMAX METAL PRODUCTS CO.

863 EAST 140th ST., CLEVELAND 10, OHIO

For more details circle NED-421 K7 on enclosed inquiry slip

Shipping Problem? call EMI

anything can be **"well stacked"** or shipped on EMI racks

Big or little, strong or fragile, *anything* stacks or ships better on EMI quality racks. They protect stock, cut handling costs and speed inventory.

EMI RACKS are made of strong, tubular steel and are adjustable to fit any space or unit load. Special racks designed to your specifications with field engineering service on any installation.

Write for our illustrated catalog before you plan additional storage space or the purchase of stacking or shipping equipment.

Well Stacked Racks for Industry

EQUIPMENT MFG. INC.

21566 HOOVER ROAD DETROIT 5, MICHIGAN

For more details circle NED-422 K7 on enclosed inquiry slip

If your pumping requirements involve pressures from 100 to 6000 psi, temperatures up to 300°F, you'll find John Bean's pump literature extremely helpful. Get these data-packed bulletins for handy finger-tip reference . . . or avail yourself of John Bean trained and experienced engineers for immediate action.

FREE

- L-1166 Triplex Pumps, inside packed
- L-1167 Triplex Pumps, outside packed
- L-1168 Triplex Power End for industrial reciprocating pumps
- L-1125 Vertical Duplex Pumps
- L-1169 John Bean Pump Accessories
- L-1106 Aquablast High Pressure Washers

ALSO CUSTOM DESIGNED PUMPS

SEND INFORMATION REQUEST FORM TODAY
(Please list catalog number wanted)

fmc FOOD MACHINERY AND CHEMICAL CORPORATION

John BEAN Division of Food Machinery and Chemical Corporation
INDUSTRIAL SALES DEPT.
LANSING 4, MICHIGAN SAN JOSE 1, CALIFORNIA

For more details circle NED-423 K7 on enclosed inquiry slip

• The modern P.D.Q. tooling method completely eliminates the time lost in changing old fashioned type tools. No more "sweating out" loosening and tightening the draw bolt. A 60° turn of the lock nut and you're ready for another tool. P.D.Q. tool changes are only a matter of seconds . . . and tools are available in very small, small, medium and large series depending on the application. Write for literature covering all the advantages of modern, cost cutting P.D.Q. (Portage Double Quick) tooling.

REPRESENTATIVES IN PRINCIPAL CITIES

PORTAGE Double-Quick TOOL CO.
1043 SWEITZER AVENUE • AKRON 11, OHIO

For more details circle NED-424 K7 on enclosed inquiry slip

Crane Bronze No. 960 Pressure Regulator

CRANE
PRESSURE REGULATORS
for dependable accurate control of steam and air pressure

These regulators are particularly suitable for use in modern process work, on vulcanizers, cookers, dryers, paper machines, heating systems, air blasts and many other services.

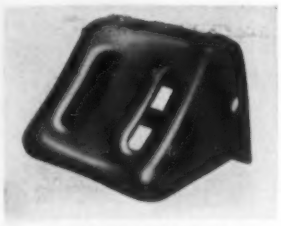
Outlet pressures not affected by inlet fluctuations. No pressure build-up.

Sizes ½ to 2 inches. For maximum inlet pressures of 250 lb. air or 250 lb. steam up to 450°. See your local Crane Representative or write for literature.

CRANE VALVES & FITTINGS
PIPE • KITCHENS • PLUMBING • HEATING
Since 1855—Crane Co., General Offices: Chicago 5, Ill.
Branches and Wholesalers Serving All Areas

For more details circle NED-425 K7 on enclosed inquiry slip

WHEEL BLOCK
for trucks and other vehicles



High strength cast steel is used in the model WB17 Jet wheel block for trucks and passenger vehicles, small aircraft, and such wheel - mounted equipment as drills, compressors, generators, welders, and pumps. Used where blocking is required on paved or hard surfaces, the block has a formed curvature which provides complete tire engagement. Calk arrangement grips pavement. Made with rounded edges and corners, the block weighs 8 lb. Made by **Calumet Steel Castings Corp.**, 1638 Summer St., Hammond, Ind.

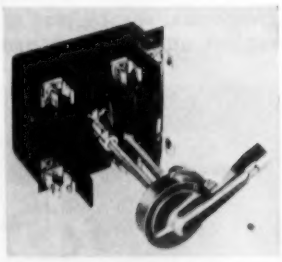
For more details circle NED-426 K7 on enclosed inquiry slip

POP SAFETY VALVES
for up to 300 psi steam service

ASME approved for power boilers and unfired pressure vessels, the 1875 series of Super Capacity top-guided bronze pop safety valves is intended for steam generator, air, or gas service at set pressures up to 300 psi at 450° F. Features include extra-long top guiding, optically machined and lapped flat seat, and self-aligning disk. Plain cap, open lever, and packed cap and lever styles are offered. Sizes from ½ to 3 in. have male inlet and female side outlet. Made by **Farris Engineering Corp.**, 551 Commercial Ave., Palisades Park, N. J.

For more details circle NED-427 K7 on enclosed inquiry slip

DISCONNECT SWITCH
fusible unit fits any panel



Available in 30 and 60-amp ratings, the Visi-Flex De-Ion fusible disconnect switch will fit any panel. Models with 100 to 200-amp ratings will be offered soon. When used as a disconnect switch, a safety shield without fuse clips is available. The 30-amp unit is supplied with a shaft for mounting depths of 5 1/16 to 8 21/32 in. Shaft for the 60-amp switch makes possible mounting depths of 5 13/16 to 10¾ in. Special shafts for greater mounting depths can be supplied. Made by **Westinghouse Electric Corp.**, Box 2099, Pittsburgh 30, Pa.

For more details circle NED-428 K7 on enclosed inquiry slip

BIN STUCK LATELY?

There are two ways to handle a stuck bin. You can bang it loose with a sledge hammer, and damage your equipment; or you can install Cleveland Vibrators and put an end to your problem. The first way is slow and costly. But the second way is efficient, fast, and inexpensive.

How about you! Are your schedules suffering from stuck bins? The low cost of Cleveland Vibrators will surprise you, and the results will definitely please you. Why not get the whole story with a two-cent post card.

Air or Electric
Portable or Permanent
Silent or Standard

THE CLEVELAND VIBRATOR CO.
2744 Clinton Ave. • Cleveland 13, Ohio

For more details circle NED-429 K7 on enclosed inquiry slip

ERIEZ Magna-Mover automatically conveys and elevates small steel parts—offers many AUTOMATION ADVANTAGES

New, slim model permanent magnetic conveyor-elevator has bed only 8" wide! *Magnetically* moves small items such as nails, caps, stampings, parts, etc., up inclines from 60° to 90°. Lightweight, space-saving. Items are held firmly and safely to the conveyor belt by lifetime-powered non-electric magnets, and are automatically discharged. Magna-Mover reduces manual handling — lowers production costs. It cuts down loading and unloading delays—increases production. Reduces damaged parts —increases quality. Reduces manpower fatigue—saves on labor costs. Two models: 31-SN-12, for average conveying-elevating purposes; 31-SN-6, has greater magnetic strength for heavier parts.

ERIEZ HI-POWR MAGNETIC SEPARATORS

Magnetic SEPARATION AUTOMATION VIBRATION equipment

For literature on the complete line of Magna-Movers, write for BIG NEW BULLETIN.
ERIEZ MFG. CO., 80-X Magnet Drive, Erie, Pa.

For more details circle NED-430 K7 on enclosed inquiry slip

OUTPERFORMS and Out Values all lift trucks in its class
Regardless of Price!

ENGINEERED YEARS AHEAD

- Complete bearing control throughout
- Synchronized 12-volt heavy duty system
- Feather-controlled steps
- Equipped with automatic charger and heavy duty industrial battery
- Self-aligning dual floor brakes

OPERATES IN 28" AISLES

APPLICATIONS

- Hydraulic loading, unloading, stacking, moving, any type of material...in large or small plants.

MORE THAN 40 BIG JOE MODELS

- Range up to 2000 lbs. capacity
- Lifting heights to 130"

NEW 24-PAGE CATALOG
In-Between Handling is our business! Write for our new 24-page catalog.

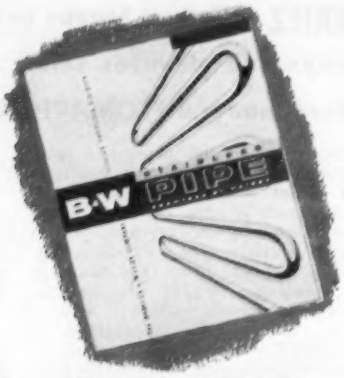
THROUGHOUT THE WORLD

Export Division: 400 West Madison St., Chicago

BIG JOE
MANUFACTURING CO.
Industrial Rd.
Wisconsin Dells, Wisc.

©1957

For more details circle NED-431 K7 on enclosed inquiry slip



New Data

on B&W Stainless Pipe . . . SEAMLESS OR WELDED

Temperature, corrosion, contamination problems? They're solved efficiently, economically with B&W Stainless Steel Pipe and Welding Fittings. For the whole story—available grades, sizes, mechanical and physical properties, bending, forming, welding techniques—write for B&W Bulletin 410. The Babcock & Wilcox Company, Tubular Products Division, Beaver Falls, Pa.

B&W TUBULAR PRODUCTS DIVISION

TA-6058—PL-3

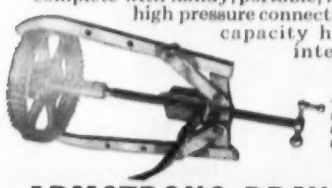
Seamless and welded tubular products, seamless welding fittings and flanges—in carbon, alloy and stainless steels

▲ For more details circle **NED-432 K7** on enclosed inquiry slip ▲

ARMSTRONG-BRAY HYDRAGRIP HYDRAULIC PULLERS

Valuable Maintenance Tool

With the handy HYDRAGRIP and a few ARMSTRONG-BRAY Pullers, you can quickly, safely and easily remove gears, wheels, bearings, sheaves or parts from shafts, can re-install them with equal ease. Single centered ram assures aligned thrust that moves parts along shafts smoothly without wedging or binding. Saves time, saves parts—ends battering and breakage. The HYDRAGRIP—comes complete with handy, portable, hydraulic hand pump, high pressure connecting hose and 17½-ton capacity hydraulic jack with interchangeable heads.

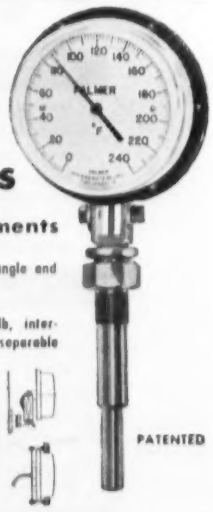


Write for Catalog Sheet—describes HYDRAGRIP and complete line of standard and special external and internal pullers.

ARMSTRONG-BRAY & CO.
5362 NORTHWEST HIGHWAY • CHICAGO 30, ILL.

▲ For more details circle **NED-433 K7** on enclosed inquiry slip ▲

PALMER MERCURY ACTUATED DIAL THERMOMETERS



in 3 types to suit any requirements

Full 4½" dial face. Stem can be placed at any angle and case can be rotated to any readable position.

1 **Rigid Stem Dial Thermometer** tapered bulb, interchangeable with standard industrial thermometer separable socket. (As illustrated above.)

2 **Wall Mounted Dial Thermometer** with flexible connecting armor. Case adjustable to easy reading position.

3 **Flush Mounted Dial Thermometer** for panel mounting with flexible connecting armor.

PATENTED

All three types have a full 4½" dial face.

for accuracy: Mercury actuated . . . Fully Compensated by Invar Compensation. Guaranteed Accurate 1 scale division.

for angularity: Can be adjusted to most readable position at any angle desired.

for readability: Bold Black Numbers . . . 11" of scale Reading Dial face can always be placed in easiest readable position.

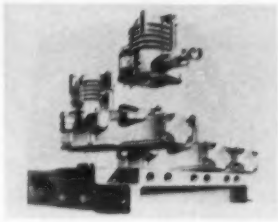
for interchangeability: Always specify "PALMER" Separable sockets as they are interchangeable for Dial or Industrial type Thermometers.

WRITE FOR CATALOG INFORMATION

PALMER THERMOMETERS, INC., Cincinnati 12, Ohio
Mfrs. of Industrial Laboratory Recording and Dial Thermometers

▲ For more details circle **NED-434 K7** on enclosed inquiry slip ▲

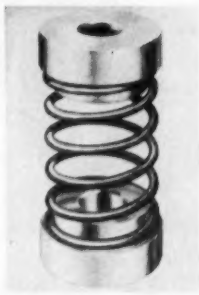
CONTROL VALVES with plug-in electrical connections



Original installation and in-service maintenance time is minimized with use of Speed King ¼-in. four-way control valves offered in both single and double solenoid types, for manifold or sub-base mounting. Plug-in connectors built into pilot, valve body, and manifold complete electrical connections as components are bolted in place. Designed for control of smaller devices on 30 to 250-psi air, valves are available with solenoid coils for alternating or direct current, any voltage. Encased in molded epoxy, coils are guaranteed against burn-out. Manual over-ride for use during machine setup is optional. Pilot plungers and valve stem are only moving parts, and service life is in excess of 25 million cycles. Made by **Valvair Corp.**, 947 Beardsley Ave., Akron 11, Ohio.

▲ For more details circle **NED-435 K7** on enclosed inquiry slip ▲

DRILL SAVING DEVICE reduces machine drill breakage



Drill breakage that occurs in drilling small to medium parts at the moment the drill breaks through is reduced or prevented by use of the Ford Drill-Saver. It also minimizes hand injuries caused by this condition. Device is installed on any drill press with a ⅝-in. spindle. Made by **Burke Equipment Corp.**, Dept. F, 160 Essex St., Newark, Ohio.

▲ For more details circle **NED-436 K7** on enclosed inquiry slip ▲

AUTOMATIC METAL SHEAR cuts up to 4 ft wide 18-gage metal

This Plantmaster automatic metal shear decoils, straightens, shears, and stacks in one operation. It will cut up to 18-gage metal in widths to 4 ft. Improved method of feeding and straightening affords maximum saving in required floor space. Operation is fast and extremely accurate. A special unit, capable of shearing tapered blanks, is also available. Made by **General Products Co.**, Engineering Dept., Fredericksburg, Va.

▲ For more details circle **NED-437 K7** on enclosed inquiry slip ▲

Built to outlast others 4 times!

Model 8100

New ARO IMPACT WRENCH

- One-half inch, square drive, reversible, high speed, 6,000 rpm.
- Impact mechanism consists of three functional parts.

WRITE for complete literature. See your Aro Distributor.

THE ARO EQUIPMENT CORPORATION
GENERAL OFFICES—BRYAN, OHIO
Plants at Bryan and Cleveland, Ohio
Aro of Calif., 3141 S. Grand Ave., Los Angeles 7, Calif.
Aro Equipment of Canada, Ltd., Toronto 15, Ontario
Offices in All Principal Cities

ARO AIR TOOLS
Also . . . Air Hoists . . . Lubricating Equipment . . . Aircraft Products . . . Grease Fittings

▲ For more details circle **NED-438 K7** on enclosed inquiry slip ▲

HOW SORENG "TT" STOCK SOLENOIDS Can Meet Your Design Requirements Economically

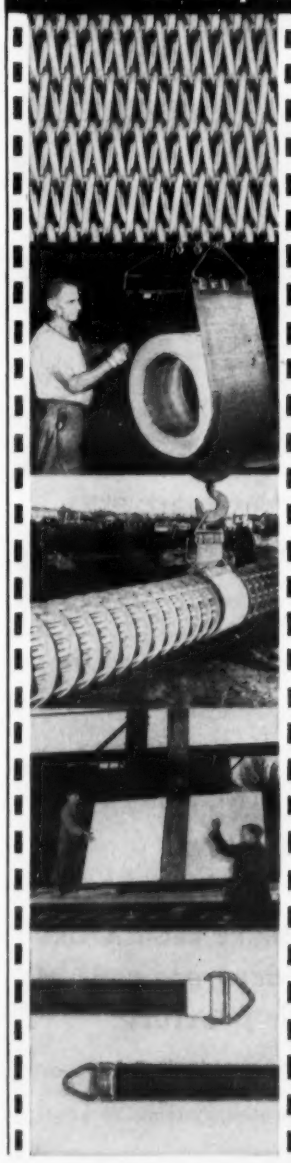
All the exclusive custom features that have made Soreng a-c solenoids the most widely used in the world are embodied in the design of our stock line. One of our four basic types will probably fit your application . . . at the same time, you benefit from production run prices made possible through standardization.

For complete information write for Bulletin CF-124. It contains drawings, power curves, applications and other technical data.

CONTROLS COMPANY OF AMERICA
SORENG DIVISION
9577 Soreng Avenue • Schiller Park, Ill

▲ For more details circle **NED-439 K7** on enclosed inquiry slip ▲

GRIPPER SLINGS Star Performer for any lifting job



Made of WOVEN WIRE with unique, spiral loop construction that gives maximum flexibility and strength with minimum chance of load damage.

Broad, flat bearing surface gives greater load stability. All metal construction resists wear and corrosion.

Used in BASKET HITCH for maximum strength or CHOKE HITCH for maximum gripping power.

For lifting light or heavy loads. Conforms to any size or shape.

AVAILABLE in standard lengths, widths and PRETESTED capacities up to 100,000 lbs.—special sizes on request. See your materials handling or mill supply distributor for a demonstration. OR, write direct for free catalog and name of nearest distributor.

The Cambridge Wire Cloth Co.
Dept. AG • Cambridge 10, Md.

WIRE CLOTH | WOVEN WIRE CONVEYOR BELTS | WIRE CLOTH FABRICATIONS

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

DEALERS: ask about open territory data

▲ For more details circle **NED-440 K7** on enclosed inquiry slip ▲

New Electronic Comparator by SHEFFIELD

Sheffield's new ACCUTRON is a high-precision portable measuring instrument having many exclusive advantages.

- Dual amplifications range from 1M/2M to 20M/40M. Switching from one to another can be done without realignment.
- Selective gaging pressures from 2 oz. to 40 oz. accommodate all types of work including thread checking at 16 oz. or 40 oz.
- The contact stylus is readily interchangable. Thus, no relapping when threads are checked.
- The small compact pick-up unit allows a full view of the work at all times.
- The meter needle does not drift when the operator removes his hand after making the fine adjustment.
- The super-rigid spindle mount assures consistent readings.

For complete specifications and prices, write to The Sheffield Corporation, Dayton 1, Ohio, U.S.A.—Dept. 13.

7590

the SHEFFIELD corporation
measurement and measurement for mankind
of Bendix Aviation Corporation

For more details circle NED-441 K7 on enclosed inquiry slip

To meet your needs for variable speeds

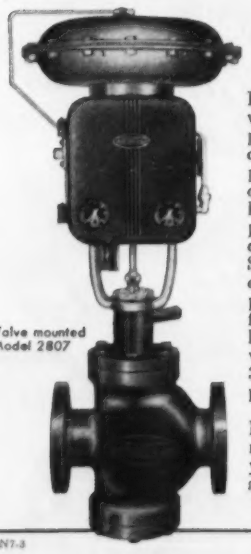
ASK FOR CLEVELAND SPEED VARIATOR BULLETIN K-200

THIS unique variable speed drive gives you infinitely variable, stepless speeds up to 9:1 (from ⅓ to 3 times input speed). Precise adjustment gives instant, smooth speed change by manual, automatic or remote control. Simple construction, compact, quiet running. No belts, no complicated linkage. Thousands in use.

THE CLEVELAND WORM & GEAR COMPANY
Speed Variator Division, 3283 E. 80th St., Cleveland 4, Ohio
Sales Representatives in all major industrial markets

For more details circle NED-442 K7 on enclosed inquiry slip

Now! Fast, Accurate Low-Cost Pressure Control...



Valve mounted Model 2807

Masoneilan 2800 Series

Pneumatic feedback combined with amplifying relay type pilot produces very sensitive control where fast, high capacity valve operation is required. Air consumption is low. 2800 Series has large output capacity, low to intermediate (0-30) proportional band. Simple, rugged and compact construction, easy to install, proven dependability. Ideal for large valves, or where long line is necessary between valve and instrument. Similar 3800 Series available for temperature control.

SEND FOR *FREE* BULLETIN . . . Wide selection of ranges, moderate cost gives you new opportunity for instrument control.

MN7-3

MASONEILAN

MASON-NEILAN
Division of Worthington Corporation
69 Nahatan Street, Norwood, Massachusetts

A Complete Line of Control Valves, Control Instruments, Regulators, Liquid-Level Controllers and Special Process Control Equipment.

For more details circle NED-443 K7 on enclosed inquiry slip

ELECTRIC WATER HEATER designed for industrial applications

Specifically designed for on-the-spot supply of hot water in factory offices and production areas, this UL-approved 10-gallon Hubbell electric water heater is compact and easy to install. It measures only 34 in. high by 18 in. in diameter and has a gray hammertone finish. Choice of 10-year guarantee galvanized or 20-year Everdur copper alloy tank is offered. Steel jacket, brass drain faucet, corrosion preventing magnesium anode, and rock wool insulation are standard. Made by **Electric Heater Co.**, Dept. NE, Stratford, Conn.

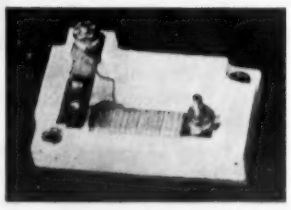
For more details circle NED-444 K7 on enclosed inquiry slip

BAND SAW BLADE hard cutting edge and flexible back

Thicknesses from 0.025 to 0.042 in. are available in Safe-Flex high speed steel band saw blades. Heat treating methods control hardness, graduating from a very hard cutting edge to a tough, flexible back. Saw stock is welded into band by a process which creates a weld as strong as the parent metal. Blade will retain its hardness up to red-heat temperatures of 1100° F. Regular, hook-tooth, and skip-tooth types are available in four widths and a wide variety of pitches for cutting all ferrous alloys, tool and die steels, titanium, and other hard-to-cut metals. Made by **L. S. Starrett Co.**, Dept. ED, Athol, Mass.

For more details circle NED-445 K7 on enclosed inquiry slip

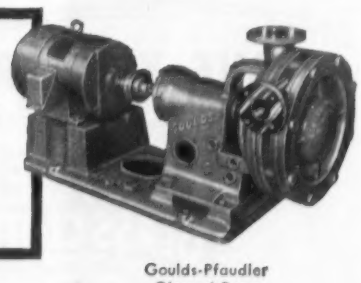
THERMOSTATIC FLASHERS handle lamp or inductive loads



Normally-open types of lamp loads and normally-closed types for inductive loads are available in these thermostatic flashers. Flashing rate is 20 times per minute for units rated to 100 w, and 12 to 16 times per minute for larger units with ratings to 600 w. Screw adjusts the ratio of on-off time. Standard flashers operate on 110-v ac or dc, and specials are available for 5 to 220-v operation. Made by **Betts & Betts Corp.**, Dept. N, 213 W. 14th St., New York 11, N. Y.

For more details circle NED-446 K7 on enclosed inquiry slip

Pump *corrosives* in glass



Goulds-Pfaudler Glassed Pump

Now you can pump acids and alkalies—for years.

New. All liquid-contacting parts on this new Goulds-Pfaudler centrifugal pump are glassed. The glass resists all acids except hydrofluoric up to 212° F. (and higher in many cases), as well as many mild alkaline solutions.

Tough. The glassed surfaces are tough. The powerful mechanical and chemical interlocking of the glass and metal provides an inseparable bond. The glass can't crack or shatter.

Cost less. Goulds-Pfaudler glassed pumps cost less than some special-alloy pumps. If you're pumping corrosives, the high efficiency and long life of these new pumps are almost sure to bring you substantial savings.

Sizes. Four sizes offer capacities to 700 GPM, heads to 140 ft.

Complete information in Bulletin 725.2.

GOULDS PUMPS FOR CORROSIVES

Main Office and Works
GOULDS PUMPS, INC.
Seneca Falls, New York
Branches and Representatives in all principal cities

For more details circle NED-447 K7 on enclosed inquiry slip

SOLDERING HOT in just 5 seconds

You get *full* soldering heat in just 5 seconds with a Weller Soldering Gun. No waiting, no need to plug or unplug. With *triggermatic* control, heat is instantly on—instantly off. Exclusive Weller Tip-Grip assures constant, uniform heat. Long-life Wellertips are chisel-shaped to provide the greatest possible transfer of heat. Select the correct heat for your needs from 5 models—100 to 275 watts, including single heat and dual heat types.

FULLY GUARANTEED FOR 1 YEAR
Order from your Distributor or Write direct for Catalog

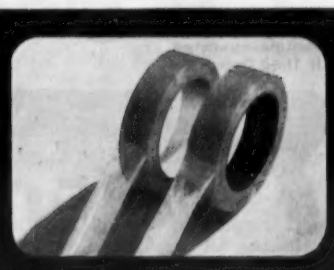
ONLY $7.95 and up

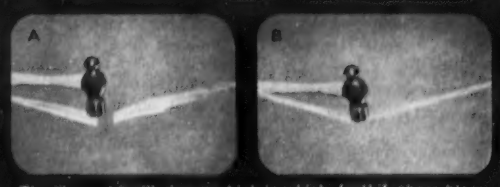
Weller ELECTRIC CORPORATION
601 Stone's Crossing Rd., Easton, Pa.

For more details circle NED-448 K7 on enclosed inquiry slip

Which one is cellophane tape? Which is New MYSTIK KYLON®?

Side by side it's almost impossible to tell Kylon—the new miracle plastic film tape—from cellophane. Both are crystal clear and look exactly alike.





The "impact test" shows which is which, fast! A sharp blow snaps cellophane tape (a). But new Kylon "soaks up" shock and abuse (b), recovers after repeated impact. Nine times greater tear strength, too. Makes Kylon best for packaging and every use.

KYLON®... the new name for transparent tape

Higher impact resistance and greater packaging strength is just one of Kylon's 5 important advantages over cellophane. Kylon is waterproof and moistureproof. It's ageproof. It has superior holding power and comformability. It's best for printing. Yet it costs no more than cellophane. Make the comparison yourself. Mail coupon for free sample.

MYSTIK INDUSTRIAL TAPES

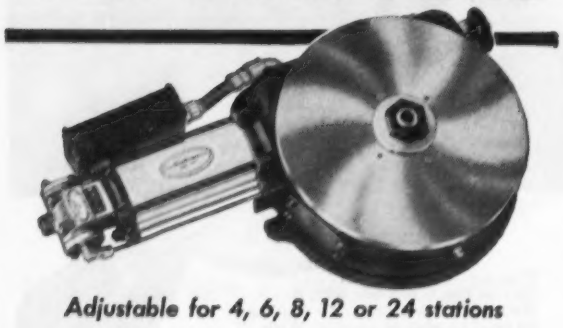
MT NED-107
MYSTIK ADHESIVE PRODUCTS, Inc.
2635 North Kildare Avenue, Chicago 39, Illinois

Please send sample and full information about new Mystik Kylon . . . successor to cellophane tape.

Name
Position
Company
Address
City Zone State

For more details circle NED-449 K7 on enclosed inquiry slip

Let's CUT COSTS with AIR POWERED DIAL FEED



Adjustable for 4, 6, 8, 12 or 24 stations

This 10" diameter Rotary Feed Table will position parts accurately and quickly. Permits work to be done at one or more stations while operator loads and unloads at other stations. Electrically controlled valve built-in. Only one air connection required.

Write for Bulletin RT 1022. Address Dept. NED 1057

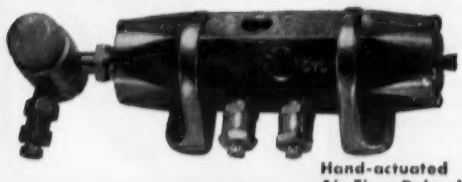
The Bellows Co.
AKRON 9, OHIO

889-B

For more details circle NED-450 K7 on enclosed inquiry slip

IT'S NEW BECKETT AIR TIME DELAY VALVE

Solenoid-operated Air Time Delay Valve



Hand-actuated Air Time Delay Valve

- Adjustable delay time to 30 seconds. Accurate repetition.
- Solenoid and hand-actuated models for air and hydraulics.
- Sizes 1/8" through 1" NPT ports.
- Standard or manifold mounting.
- Time delay unit for hand-actuated valve can be supplied in kit form for remote mounting.
- Exhaust controls optional for air models.

. . . For any directional Control Valve Requirement

first check it with Beckett!

✔ A complete line of advanced-design air and hydraulic control valves. More than 150 models—solenoid, manifold, piloted, solenoid piloted, lever, cam roller, spring center, detent and combinations of these actuators.

✔ All spool types: 2 position, 3 position, float piston, open center, closed center, servo, port exhausting center position.

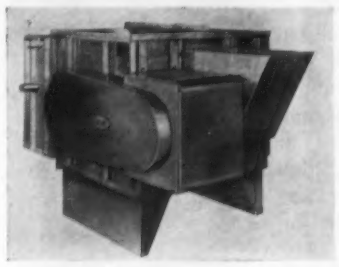
✔ All carried in stock for immediate delivery. Write for complete valve catalog or detailed information on Hi-Cyclic Valves to meet your specific requirements.

DISTRIBUTORS IN MAJOR CITIES COAST-TO-COAST

THE BECKETT-HARCUM COMPANY
1147 WAYNE ROAD, WILMINGTON, OHIO

For more details circle NED-451 K7 on enclosed inquiry slip

CONDENSERS save water in large air conditioning systems

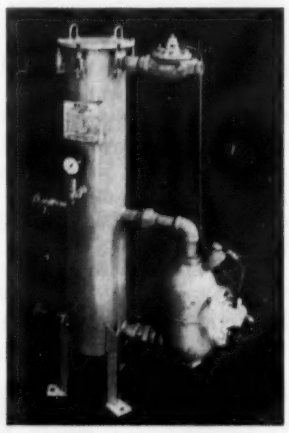


Water supply problems in large air conditioning and refrigeration systems are minimized with use of either of two new condensers, designed for compact installation and low operating costs. One is an evaporative condenser available in 13 sizes to cover a capacity range of 5 to 250 tons. This unit employs a method of wetting coils with vaporized water, drawing heat from the refrigerating system.

The other air-cooled condenser, made in seven sizes from 2 to 38 tons capacity, dissipates heat from refrigerant directly to the air, requiring no water at all. A quiet centrifugal fan allows this unit to be installed indoors and discharge to outside through ductwork. Both units can be installed indoors or out. Photo shows an air-cooled model. Made by **Carrier Corp.**, 300-A S. Geddes St., Syracuse 1, N. Y.

For more details circle NED-452 K7 on enclosed inquiry slip

FILTER-SEPARATOR fuels, oils, and solvents are processed at 5 to 40 gpm flow rates



Replaceable - cartridge type Reco filter-separator SV-11 will remove condensed water, waterborne contaminants, and solids from fuels, oils, solvents, and other oily liquids at flow rates from 5 to 40 gpm. Unit is also suitable for many aqueous solution treatments. Maximum working pressure is 150 psi. Rated at 15 gpm, the unit handles light fuels such as gasoline at 30 to 40 gpm, kerosenes and jet fuels at 20 to 25 gpm, and heavy diesel fuels at 10 gpm.

Unit removes all undissolved water from hydrocarbon liquids, retains all solids over 5 microns in size, and will operate under vibration or tilt up to 45 degrees. Cartridge is a 1-in. thick wrapping of resin-bonded glass fiber on expanded metal. Gage, measuring pressure drop across cartridge, indicates need for replacement. Unit can also be used to filter swimming pool supplies, industrial waters, engine cooling waters, and slurry tailings. Made by **Richmond Engineering Co.**, Dept. NED, Seventh & Hospital Sts., Richmond 5, Va.

For more details circle NED-453 K7 on enclosed inquiry slip

HAVE YOU TRIED...

FLIGHTEX GLASS CLOTH

AND

FLIGHTEX
FLIGHTEX FABRIC
INDUSTRIAL FABRICS

If you use special industrial fabrics and mechanical tapes, you'll find Flightex a dependable source of supply. Our staff of engineers is at your service to help solve your fabric and tape problems.

Write for Complete Information

FLIGHTEX FABRICS, INC.
93 Worth Street • New York 13, N. Y.

For more details circle NED-454 K7 on enclosed inquiry slip

NEW AND FREE

Full of facts on every "Right Combination" you need in

Reinforced Grinding Wheels

Here's the whole story on Norton reinforced wheels — a complete line for everyday grinding jobs. Tells how each of the many types of wheels combines exactly the right abrasive, reinforcing web and bond to assure strength and safety — plus fast, cool, trouble-free grinding. Catalog No. 1748 also describes reinforced mounted wheels and sticks. Ask your distributor for it. Or write to NORTON COMPANY, General Offices, Worcester 6, Massachusetts.

W-1812

NORTON ABRASIVES *Making better products . . . to make your products better*

NORTON PRODUCTS Abrasives • Grinding Wheels • Grinding Machines • Refractories
BEHR-MANNING DIVISION: Coated Abrasives • Sharpening Stones • Behr-cat Tapes

For more details circle NED-455 K7 on enclosed inquiry slip

Get the **COUNT!**

Durant Sales Engineers will supply a PRODUCTIMETER for every and any counting need in your plant.

Send for Bulletin #200

DURANT MANUFACTURING CO.
1922 N. Buffum St., Milwaukee 1, Wis.
22 Thurbers Ave., Providence 5, R.I.
Representatives in Principal Cities

PRODUCTIMETERS SINCE 1879 *Count Everything*

For more details circle NED-456 K7 on enclosed inquiry slip

Cut Fastener Costs 25% or More with Tinnerman Push-On

Speed Nuts®

New Tinnerman Push-On Type SPEED NUTS offer the ultimate in fastening economy and efficiency. They cost less than ordinary fasteners, eliminate costly threaded parts. These one-piece, self-locking, spring steel fasteners start by hand, zip down over integral studs, rivets, tubing, nails, any unthreaded parts. They provide a bite lock on smoothest, hardest surfaces . . . vibration-proof attachments on all popular stud sizes, round, D-shaped, rectangular. Write for literature and free production samples.

TINNERMAN PRODUCTS, INC.
BOX 6688, DEPT. 12, CLEVELAND 1, OHIO

For more details circle NED-457 K7 on enclosed inquiry slip

WHO?

Who makes the *best* Carbon Dioxide Fire Extinguishers? Kidde does, in 2½, 5, 10, 15 and 20 lb. trigger-grip and squeeze-valve models. Both types snuff fire fast, leave no mess to clean up. Write for Kidde's P-8 Catalog.

Who has the *best* fire extinguisher servicing? Your Kidde recharging service station. Look in the Yellow Pages, or write Kidde for name and address of your nearest sales or service station.

Kidde

Walter Kidde & Company, Inc.
1024 Main St., Belleville 9, N. J.

For more details circle NED-458 K7 on enclosed inquiry slip

JET ROCKET—

only low-priced tools with these safety features

handle won't break

head can't loosen

grip won't slip

No. B16
16-oz.
NAIL HAMMER

Tubular, boron-alloy steel handle won't bend or break in normal use. Forged steel head can't come off – jet black finish resists rust. Black cushion grip soaks up shock, won't slip wet or dry or in gloved hand. Perfectly balanced, comfortable to use, and priced surprisingly low. You get all these time-and cost-saving advantages in JET ROCKET nail hammers, rippers, hatchets, and ROCKET ball peins. Contact your True Temper distributor.

WRITE FOR FREE CATALOG
"TOOLS FOR INDUSTRY"
True Temper, 1623 Euclid Ave., Cleveland 15, O.

TRUE TEMPER

Finest quality in Hammers, hatchets, axes • Shears Garden, lawn and farm tools • Golf-club shafts Fishing tackle • Shovels •, Railroad products

For more details circle NED-459 K7 on enclosed inquiry slip

MOBILE PRINT RACK
holds 80 maps or drawings

Mounted on double ball bearing, rubber tired casters, the welded steel model V-80 mobile drawing or map rack is designed for use by draftsmen in the working area, as well as for a mobile file. Its 49⅜ x 16⅜-in. size holds 80 prints of any size. Telescoping metal-end tubes can be used together for dustproof filing or singly for open-end filing. Made by **Ross-Martin Co.,** Dept. 857-BNE, Box 800, Tulsa 1, Okla.

For more details circle NED-460 K7 on enclosed inquiry slip

MIDGET DIE GRINDERS
operate at up to 60,000 rpm

Intricate precision grinding, filing, and cutting jobs can be done with two midget pneumatic die grinders. Model 200, shown, operates at up to 60,000 rpm and weighs only 4 oz. It has a ⅝-in. diameter and a ⅛-in. collet chuck. Model 300, which operates at up to 38,000 rpm, weighs 12 oz and has 1 1/16-in. diameter. It is equipped with a ¼ and a ⅛-in. collet chuck. Connection should be to an air line with a fog type lubricator-filter available as an accessory. Made by **Airetool Mfg. Co.,** 308 S. Center St., Springfield, Ohio.

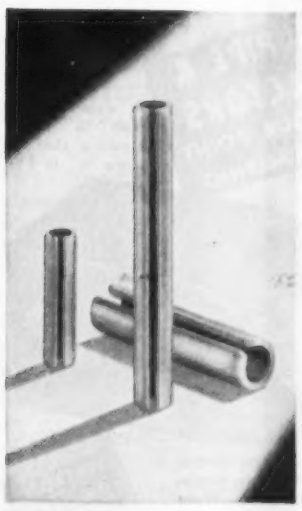
For more details circle NED-461 K7 on enclosed inquiry slip

FLOOR MACHINE
has UL explosionproof listing

UL-listed for Class 1, Group D and Class 2, Group G service, the model CX explosionproof floor machine is approved for use in plants, refineries, and other locations where explosive atmospheres exist. It is available with a selection of UL-listed static conductive brushes for scrubbing, polishing, and dry scraping. A 3-gal tank on the handle converts the machine for floor scrubbing. Made by **Hild Floor Machine Co.,** Dept. NE, 1217 W. Washington Blvd., Chicago 7, Ill.

For more details circle NED-462 K7 on enclosed inquiry slip

SEL-LOK spring pins eliminate tapping, peening, milling



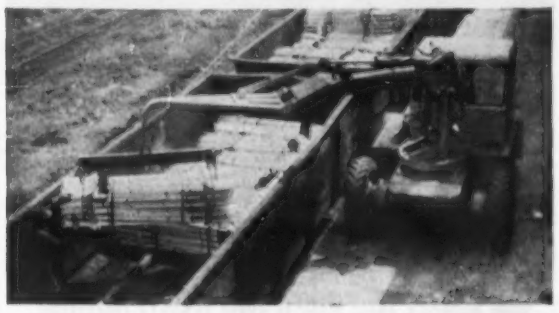
SEL-LOK spring pins are installed in plain drilled holes in one simple driving operation. They lock by spring action. Use them as axles, keys, hinge pins, cotter pins, pivot or stop pins. A SEL-LOK stays put, once you've installed it. It resists vibration and shock. It can be removed easily with a drift pin or punch, and reused again and again. These versatile pins are stocked by your authorized industrial distributor in sizes ranging from 1/16 by 3/16 to ½ by 5 in., in heat treated alloy or corrosion resistant steel. Write us for Bulletin 2014 and samples. Sel-Lok Spring Pin Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
SEL-LOK SPRING PIN DIVISION **SPS**
JENKINTOWN PENNSYLVANIA

For more details circle NED-463 K7 on enclosed inquiry slip

VERSATILE YARD MACHINE
replaces several special-purpose machines; features exclusive 180° boom swing for tight spots

Pettibone's versatile Speed Swing 6-in-1 yard machine, with crane attachment, was recently selected by a well-known steel company to load steel fence posts in

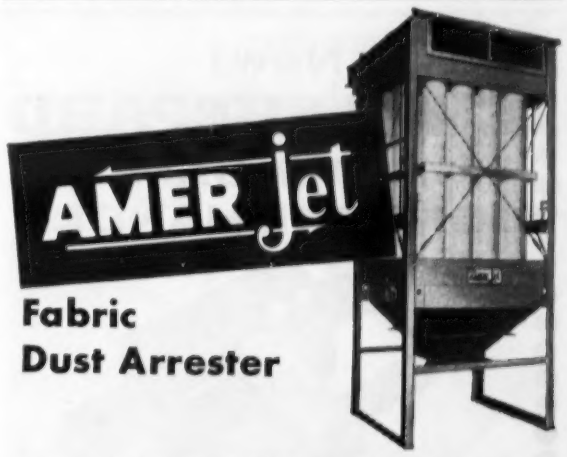


close quarters. Crane, fork, bucket, dozer, car spotter and snow removal attachments enable Speed Swing to replace several special-purpose yard machines. 2 or 4 wheel power-booster steering, Torqmatic power-shift transmission and planetary axles maneuver Speed Swing into tight spots. The exclusive 180° boom swing gets work done in places which no other machine can touch. Send for Bulletin P-264-NB.

THE NEW YARD SENSATION **PETTIBONE** SPEED SWING

Pettibone Mulliken Corp., 4700 W. Division St., Chicago 51, Ill. • SPaulding 2-9300

For more details circle NED-464 K7 on enclosed inquiry slip



Fabric Dust Arrester

AMERjet is designed specifically for collecting extremely fine dust or dust that must be reclaimed dry. Its cleaning media is continuously conditioned by a reverse jet of high-pressure air. This permits velocities through the cleaning tube up to *five times higher* than ordinary fabric collectors. In addition, AMERjet offers these big plus values: (1) Occupies ½ the space of conventional collectors, (2) Reduces installation cost by 50%, (3) Lowers maintenance costs by 45%. Write for AMERjet Bulletin 279.

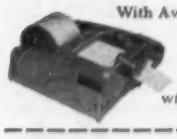
American Air Filter
COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-465 K7 on enclosed inquiry slip

use **AVERY** PRESSURE-SENSITIVE **LABELS**

for hundreds of industrial applications

In every department...from receiving to shipping...from receptionist to top management...there are many spots where Avery labels are saving industry thousands of dollars every year. Self-adhesive, they simplify and speed work wherever there's a need to *identify or inform, to warn, mask, inspect, merchandise or price.* You can save *time* and *money* with Avery labels.



With Avery electric dispensers labeling is as much as 5 times faster than with ordinary methods!

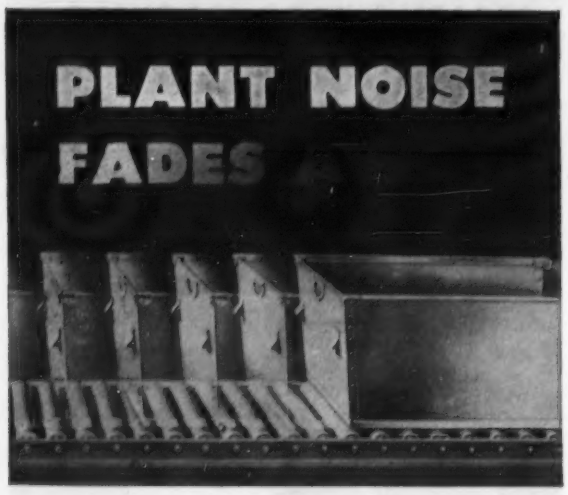
Write today for complete information.

AVERY ADHESIVE LABEL CORP., Custom Div. 102D
117 Liberty St., New York 6 • 608 S. Dearborn St., Chicago 5 • 1616 S. California Ave., Monrovia, Calif. • In Canada, 207 Queen's Quay West, Toronto 1, Ontario • Offices in Other Principal Cities

☐ More information, please... and free samples.
☐ Please have the Avery man call.

NAME
COMPANY
ADDRESS
CITY ZONE STATE
OUR BUSINESS IS:

For more details circle NED-466 K7 on enclosed inquiry slip



when materials ghost along in silent KENNETT receptacles

No more nerve-racking slam-bang or tinny crash and clatter. There isn't a clank in a factoryful of Kennett Receptacles by National. Resilient, tough National Vulcanized Fibre containers muffle sound—insulate contents against damage from impact or crushing. Weigh less than half as much as aluminum, yet defy breakage, cracks and dents. For years of hard, silent handling service, get the story of National's complete, job-engineered line. Send for free booklet, MATERIALS IN MOTION. Address Dept. K10.

NATIONAL VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

For more details circle NED-467 K7 on enclosed inquiry slip

New! LEWIS-SHEPARD® ROTO-CAM CONTROL HANDLE

FEATURED ON

JACKLIFT ELECTRICS

COUNTERBALANCE JACKSTACKERS

STRADDLE-TYPE JACKSTACKERS

PLATFORM-TYPE JACKSTACKERS

OPEN-FACE PALLET TYPE JACKSTACKERS

RIDING-TYPE JACKTRACTORS

SMOOTHER OPERATION . . . Dynamic Braking gives cushioned stops — Controlled Plugging permits SMOOTH but instant reversing

SIMPLER OPERATION . . . 2 speed operation in both forward and reverse gives power when you need it with "flick of the wrist" control

SAFER OPERATION . . . double braking, no danger of jamming gives maximum operator safety

The new, exclusive L-S Roto-Cam Control Handle is the biggest step forward in "walkies" in years. It gives cushion-smooth starts and stops . . . minute inching and spotting . . . lets you reverse truck direction quickly, safely—merely by a fingertip turn of the control handle.

For double safety, there's *double* braking. Dynamic braking operates automatically when control grip is released. Emergency solenoid brake takes over when control handle is in operator safety positions.

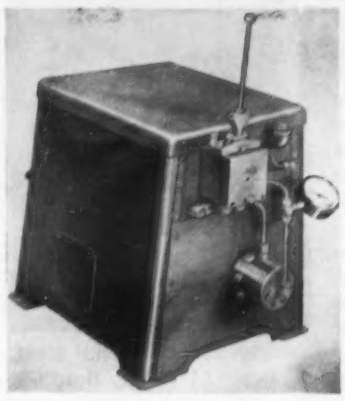
GET FULL DETAILS on the new L-S Roto-Cam Handle and the many different trucks in the L-S MASTER Line.

Circle reader service card, or return coupon.

LEWIS-SHEPARD 1710 Walnut Street, Watertown 72, Mass.
Please send me:
☐ Roto-Cam Control Circular #34-H ☐ Complete line catalog
Name
Title
Company Address
City State

For more details circle NED-468 K7 on enclosed inquiry slip

HYDRAULIC POWER SOURCE in 6000 and 10,000-psi outputs

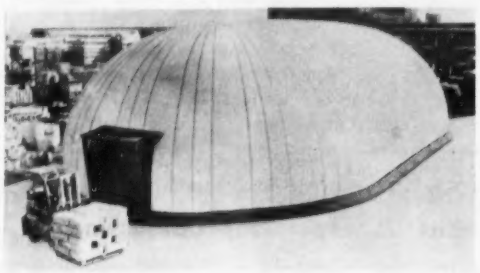


Built to provide high volume at high pressure, these packaged hydraulic power units can serve such equipment as presses, pullers, benders, and shears. Smaller model provides 140 to 220 cu in. of oil per minute at pressures up to 6000 psi, and it is driven by a 2-hp 220/440-v ac motor. Other unit delivers same range of volume at pressures to 10,000 psi and is powered by a 3-hp motor. Both pumps have a three-position lever-operated valve for either single or double-acting rams, and are equipped with filter, pressure gage, and 2-gallon reservoir. Made by **Owatonna Tool Co.**, 436 N. Cedar St., Owatonna, Minn.

For more details circle NED-469 K7 on enclosed inquiry slip

PORTABLE WAREHOUSE fabric unit, supported by blown air, is offered in a variety of sizes

Extremely low pressure air from a constantly operating electrically driven blower is used to support this portable warehouse. Dome-shaped walls and



roof of durable vinyl-coated nylon fabric are stable and under tension at all times. Roof can be walked on and will support a heavy load of snow. The structure will withstand high wind velocities. Users may open the door for any purpose, as the building is not entirely airtight.

A crew of three men can erect the building in 1 hour. The blower provides constant ventilation and can be used with heating and air conditioning equipment to maintain the interior at any temperature level. Sizes ranging from 3000 to 100,000 sq ft are available. All are easily set up, taken down, and moved. White nylon material is translucent and eliminates need for interior lighting in daylight. Made by **Hoosier Tarpaulin & Canvas Goods Co.**, Dept. NED, 1302 W. Washington St., Indianapolis 6, Ind.

For more details circle NED-470 K7 on enclosed inquiry slip

STUBBORN *broken pipes, studs, screws easily removed . . .*

WITH REPS PIPE & STUD EXTRACTORS MAKES STRONG FOUR POINT GRIP WITHOUT HAMMERING

In sizes for every pipe 1/8" to 2", every stud and screw 3/8" to 3 1/2".

A specialized tool that creates a powerful pulling bite without reaming. Hardened steel—will remove any material.

Take advantage of Walton's 30-day free trial to investigate the labor savings that this simple specialized tool can effect in your shop. Write for Data Folder #26 giving complete details.

The WALTON Company
HARTFORD 10, CONN.

For more details circle NED-471 K7 on enclosed inquiry slip

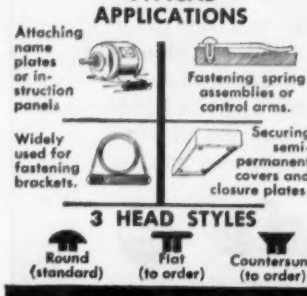
DRIV-LOK STUDS

Save 60% Fastening Time!

- HOLD PERMANENTLY
- DISASSEMBLE EASILY WITHOUT DAMAGE TO COMPONENTS

Quick, simple insertion . . . Drill Hole and Drive Stud with a single blow.

TYPICAL APPLICATIONS



3 HEAD STYLES

Driv-Lok Studs save time and reduce costs in fastening name plates, covers, brackets, panels, etc, to heavier sections and for countless other applications involving light-to-heavy member fastening. Once installed, Driv-Lok Studs will not vibrate loose or fall out—yet they can be easily removed without damage to components. Made in 3 head styles. Write for illustrated catalog sheet, prices and samples.

DRIV-LOK PIN COMPANY
717 Chauncey St. • Sycamore, Ill.

For more details circle NED-472 K7 on enclosed inquiry slip

Here's a new, lightweight, inexpensive chain hoist

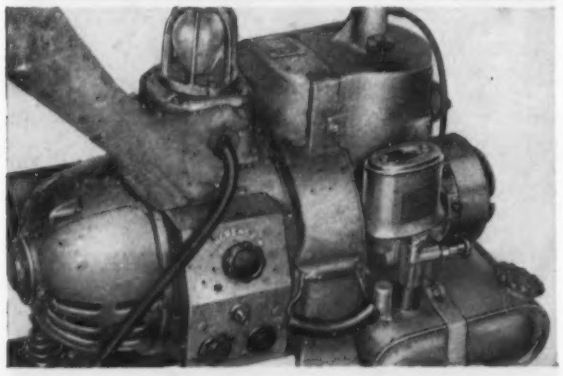
for lifting 250 lb loads quickly, safely and easily

It's the Coffing Midget Chain Hoist (Model M-25). It weighs but 11 lb, has a standard lift of 7 ft (extra chain for higher lifts available, if desired). Capacity loads of 250 lb can be lifted quickly. Load held safely by automatic load break at all times.

A special ball bearing equipped 1/8-ton capacity trolley is available to fit all standard 3-10 in. I-beams. For complete specifications, prices and delivery, write for bulletin AD-48.

Coffing Hoist
division of
Duff-Norton Company
803 Walter St. Danville, Ill.

For more details circle NED-473 K7 on enclosed inquiry slip



Plug in for Power, anywhere... Homelite Carryable Generators

For plant protection, emergency use, or for operating power tools and floodlights you can't beat a Homelite Carryable Generator. Lightweight and compact, you can set it up quickly anyplace. Dependable operation by built-in gasoline engine. Rugged construction throughout for long trouble-free service. Complete line available . . . 1500 to 5000 watts. See one in action. Write or call your nearest Homelite representative for a demonstration today.

HOMELITE
A DIVISION OF TEXTRON INC.
8510 RIVERDALE AVE., PORT CHESTER, N. Y.

For more details circle NED-474 K7 on enclosed inquiry slip

FOR ACCURATE ALIGNMENT USE **UNIVERSAL** LOCATING PINS

Hardened and ground to close tolerances, precision-made Universal Locating Pins insure quick, accurate alignment, through even the longest, toughest production runs. And their cost is substantially less than ordinary tool-room pins. Stocked in all standard sizes for immediate delivery . . . in round or relieved, press-fit, threaded or lock screw types. Write today for 98-page catalog describing the complete line of Universal quality products.

Threaded Pin — Lock Screw Pin — Relieved Press-Fit Pin

202

UNIVERSAL ENGINEERING CO. • FRANKENMUTH 5, MICHIGAN

▲ For more details circle NED-475 K7 on enclosed inquiry slip ▲

Webster DIRECT READING

HYDRAULIC TYPE

FORCE GAUGES

Measures electrode pressure on spot welders and roll welders. Makes compressive tests on forming, dimpling and upsetting operations. Also useful for weighing. Insulated contact surface prevents damage if welder is accidently fired. Easy setups, no delicate mechanisms, 5 ranges: 0-1000, 6000, 10,000, 20,000, 40,000 lbs. 3½" diameter gauge with accuracy to 1%. Reads directly in pounds—no conversion scales. Write for details.

Webster INSTRUMENT, INC.

Dept. N, 11856 Mississippi Ave., Los Angeles 25, California

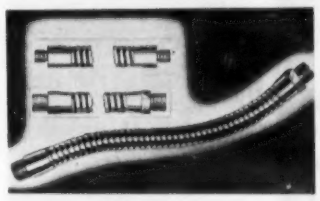
▲ For more details circle NED-476 K7 on enclosed inquiry slip ▲

WASTE RECEPTACLES
made of colored and plain aluminum

Fabricated of aluminum, Aero-Clean waste receptacles are available in anodized blue and gold color combinations. The colors, being fused into the metal, will not chip, peel, or flake off. Receptacles are also available with a plain clad aluminum finish. All are made of 2024 T-3 clad aluminum that has a tensile strength of 64,000 psi. Lock equipped inner receptacle is easily removed and replaced. Size is 18 x 24½ x 42 in., and weight is 28 lb. Made by **Harwill, Inc.**, Dept. AC-1, 400 Water St., St. Charles, Mich.

▲ For more details circle NED-478 K7 on enclosed inquiry slip ▲

FLEXIBLE LAMP ARMS
offered in five lengths



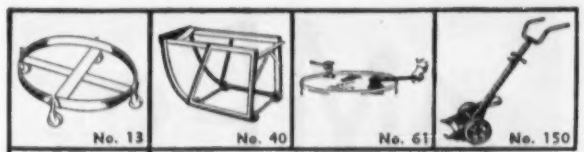
Line of Faries flexible arms, used as connectors, extensions, and supports for lamps, now includes five different lengths in brass and steel with three finishes. They have screw machine ferrules with ⅛ x ⅜-in. male pipe threaded ends. Flexible arms are offered in ¾ and ⅝-in. OD. Made by **General Lamps Mfg. Corp.**, Faries Lamp Div., Dept. MD, Elwood, Ind.

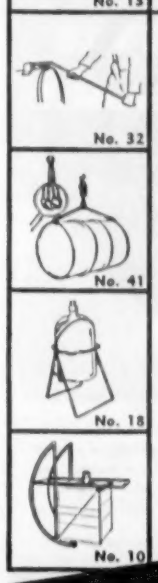
▲ For more details circle NED-479 K7 on enclosed inquiry slip ▲

VALVE OPERATORS
units for ½ to 4, ½ to 16-in. valves

Direct current motors are utilized by line of self-contained Electro-Hydraulic valve operators to operate their hydraulic pilots. Nozzle-flapper combinations are used in the pilot to control hydraulic pressure. Type 340 operator is mounted on ½ to 4-in. size valves for developing up to 600 lb of stem thrust. Type 350 (illustrated) for ½ to 16-in. valves develops up to 2000-lb stem thrust. Both may be adapted to operate on direct current input signal from any currently available instrument. Made by **Fisher Governor Co.**, Dept. NE-857, Marshalltown, Iowa.

▲ For more details circle NED-480 K7 on enclosed inquiry slip ▲





CONTAINER-HANDLING PROBLEMS? LET MORSE SOLVE THEM!

There's a Morse product for every container-handling job. Write for free folder showing complete small equipment line, and for catalog sheet of any item of special interest.

No. 150 Hand Truck Accommodates containers from 25" to 45" long.

No. 61 Drum Plug Wrench will remove or tighten 95% of all drum plugs.

No. 40 Drum Cradle Truck with four 3" diameter wheels.

No. 13 Drum Dolly of 2½" steel lip; overall height 6½"; diameter 24".

No. 32 Drum Upender with ¼" hook to clear largest chime.

No. 41 Drum Lifting Hook with 1,000 lbs. capacity.

No. 18 Bottle Tipper safely handles 5 gal. glass bottles.

No. 10 Universal Carboy Rocker for conventional size carboys with outlet 20" above floor.

MORSE Mfg. Co., Inc. E. Syracuse, N. Y.

CLIP TO YOUR LETTERHEAD:
MORSE MFG. CO., INC.
756 W. Manlius St.
E. Syracuse, N. Y.
Send me your free folder, No. 1255, showing complete line of small equipment.

▲ For more details circle NED-481 K7 on enclosed inquiry slip ▲

OIL TIGHT DUST TIGHT OMNIDIRECTIONAL

Exceptionally Rugged!

New OIL TIGHT INDICATOR LIGHTS

for heavy duty use in industrial applications

Perfect oil-tightness is effected by retained oil-proof gaskets and the gasketed glass lens assembly . . . Install easily in a single 1" or 1-3/16" panel mounting hole. Also available for 11/16" mounting hole.

Illustrations are approx. 70% actual size

A choice of *3 lens styles, 7 lens colors*, and other optional features provide adaptability.

DISCS with legends, behind flat lenses, deliver specific messages.

DIALCO

OIL TIGHT INDICATOR LIGHTS accommodate a wide range of Incandescent and Neon Glow Lamps. For neon, DIALCO offers an exclusive feature — *BUILT-IN RESISTORS* (U. S. Patent No. 2,421,321) for operation on 105-125 V, or 210-250 V. Simple external resistors are provided for all higher voltages. *EVERY ASSEMBLY IS AVAILABLE COMPLETE WITH LAMP.* For design purposes we will gladly send you:

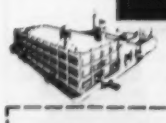
SAMPLES ON REQUEST—AT ONCE—NO CHARGE

CATALOG "L-200" gives you complete specs on DIALCO'S Oil-Tight Indicator Lights. Also available—a file of Special Catalogs on DIALCO Pilot Lights covering every indication requirement for automation and miniaturization.

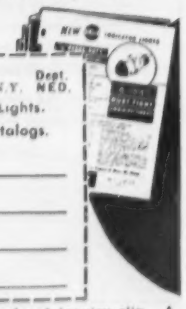
FREE— Brochure on "Selection and Application of Pilot Lights."

Foremost Manufacturer of Pilot Lights

DIALIGHT CORPORATION



46 STEWART AVE., BROOKLYN 37, N. Y.
Dept. NED
HYACINTH 7-7600



DIALIGHT CORP., 46 Stewart Ave., Brooklyn 37, N.Y. Dept. NED.
☐ Please send Cat. "L-200" on Oil-Tight Lights.
☐ "Selection" Brochure. ☐ Pilot Light Catalogs.
Name _____
Company _____
Address _____
City _____ State _____

▲ For more details circle NED-482 K7 on enclosed inquiry slip ▲

21/25 Heavy Duty Floor Drill in 21" and NEW 25" sizes. Single and multiple spindle models, 75 to 1530 rpm standard, 1½" drilling capacity.

16/24 Medium Duty drills in 16" and NEW 24" sizes. Bench and floor models, single and multiple spindle, 390 to 3100 rpm standard, 1" drilling capacity. 24" size has new larger work table.

NOW . . . 4 sizes to choose from

CINCINNATI

Sliding Head Drills

Greater throat capacity has been added to Cincinnati's industry-proven 16" and 21" Sliding Head Drills . . . the 16/24 Medium Duty Drills are built in *both* the familiar 16" and NEW 24" sizes, the 21/25 Heavy Duty models in regular 21" and NEW 25".

All of the proven features are there in all four sizes—geared power feeds, depth gage with positive stop and automatic feed disengage, sturdy box construction, and many others—giving you the ease of operation, high accuracy and stability of drilling machines that cost far more.

See these new Cincinnati drills and get all the facts at your local CL&T Dealer. Or, write to us direct for catalog data. CINCINNATI LATHE AND TOOL CO., 3207 Disney St., Cincinnati 9, Ohio.

center on **cincinnati lathes and drills**

ENGINE, TOOLROOM, TRACER AND FIXED GAP BED LATHES AND A COMPLETE LINE OF DRILLING MACHINES

▲ For more details circle NED-477 K7 on enclosed inquiry slip ▲

AMEs

have hardened and burnished pivots for higher sensitivity . . . lower friction

Because metal pivots are stronger than jeweled pivots, Ames has devised a way of hardening and burnishing them to match the sensitivity of jeweled types. The result is a dial indicator that is unsurpassed for accuracy and strength. And it costs *less* than jeweled types. This "funtional" approach is just one more reason why Ames Dial Indicators are so often specified as "preferred". Write today for complete information.

Representatives in principal cities

B.C. AMES CO.

34 Ames Street, Waltham 54, Mass.

MANUFACTURERS OF MICROMETER DIAL GAUGES • MICROMETER DIAL INDICATORS

▲ For more details circle NED-484 K7 on enclosed inquiry slip ▲

protected for life!

with contact seals of

Hoover is first to seal ball bearings with TEFLON! Hoover makes *sure* that lube stays in, dirt stays away from the smooth, mirror-like working surfaces of high quality *Micro-Velvet* Lapped Balls and *Hoover Honed* Raceways. You get greatly extended bearing life.

Why TEFLON for seals? TEFLON is the remarkable new product of chemistry . . . extra tough . . . extra long wearing . . . and so slippery that there is practically no torque resistance. Hoover seals are ingeniously engineered to maintain positive contact and improve lube circulation. Permanently attached full metal shields lock the seals within the bearing, safe from damage.

Use Hoover Ball Bearings with single or double seals of TEFLON for high speed applications, electric motors, or wherever periodic lubrication or maintenance is not practical, as in sealed units. They are available in both light and medium series.

*TEFLON is DuPont's Trademark for its Fluorocarbon Resins. *Micro-Velvet* and *Hoover Honed* are Hoover Trademarks.

hoover

BALL AND BEARING COMPANY

ANN ARBOR, MICHIGAN

SALES OFFICE AND WAREHOUSE: 2020 SOUTH FIGUEROA, LOS ANGELES 7, CALIFORNIA

Hoover Ball and Bearing Company NED-14
Ann Arbor, Michigan
Please mail my copy of Bulletin No. 100 on Hoover Bearings with Seals of TEFLON.

Name _____
Title _____
Company _____
Address _____
City _____ State _____

▲ For more details circle NED-485 K7 on enclosed inquiry slip ▲

AERIAL PLATFORM
self-propelled, controlled by user

Man on the platform of the Travel Tower, a three-wheeled self-propelled aerial platform, can drive the machine forward or reverse, steer it, raise and lower the boom, and swing the boom through a 36-degree arc. Platform capacity is 250 lb, regardless of position. All operations except forward and reverse are foot controlled. A 7½-hp Wisconsin engine with electric starter powers a hydraulic pump for elevating the boom to 13 ft and swinging the boom. Engine also drives rear wheels through a band type transmission and automobile type differential. Maximum speed is 2 mph. Steering is by braking driving wheels, individually or simultaneously. Optional equipment is a 9-cu ft compressor and air outlet on platform. Made by **Pitman Mfg. Co.**, Room 568, 300 W. 79th Terrace, Kansas City 14, Mo.

▲ For more details circle NED-486 K7 on enclosed inquiry slip ▲

VACUUM BOOSTER PUMP
speed is 5200 to 6000 cfm at 0.8 to 5 microns of mercury

Vacuum melting and heat treating applications where product quality and yield are superior when pressure is held to below 5 microns are uses for the B-12 oil diffusion booster pump. It has a 12-in. inlet and produces pumping speeds between 5200 and 6000 cfm at pressures from 0.8 to 5 microns of mercury.

Forepressure tolerance of 900 microns makes the pump useful for installation in series with high vacuum diffusion pumps where maximum gas handling capacity is required in the submicron range. Such applications include melting and heat treating furnaces, large vacuum metallizing systems, and particle accelerators.

Booster has a stainless steel body with external cooling coils. It is 50 in. high and requires a 20 x 30-in. floor space. Power consumption of 14.5 kw can be supplied by single or three-phase alternating or direct current circuits. A 200 cfm forepump is recommended. Made by **NRC Equipment Corp.**, Dept. 29NR, 160 Charlemont St., Newton Highlands 61, Mass.

▲ For more details circle NED-487 K7 on enclosed inquiry slip ▲

Install Swartwout VALVENT– low cost high capacity ventilator suitable for many jobs

In hundreds of places — for "hot spots" in large or small buildings — the VALVENT fills the need for a simple economical roof ventilator.

Gravity Model

Powered Model

Sturdy galvanized steel construction; pleasing appearance; efficient air-flow design, weather-tight. Unusually effective fan unit in powered models. Wide selection of sizes and capacities. Bases to fit any roof type.

Write for full information on VALVENT Ventilators

The Swartwout Company, 18511 Euclid Ave., Cleveland 12, Ohio

Swartwout ROOF VENTILATORS AND VENTILATING LOUVERS

AUTRONIC PROCESS CONTROL EQUIPMENT

▲ For more details circle NED-488 K7 on enclosed inquiry slip ▲

NEW ELECTRIC PREDETERMINING COUNTER

for remote operation of machines, processes, materials handling

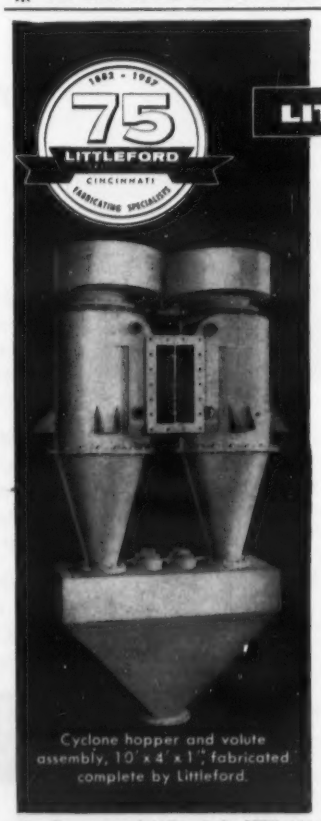
This Veeder-Root automatic predetermining control device offers, in a single unit, new convenience and flexibility in the solution of machine and process control and materials handling problems.

Predetermining control units can be grouped in a single central location for convenient setting of the predetermined quantities and visual monitoring of the accumulated counts. Additional ease of operation is afforded by the two-second duration electric reset which allows completely automatic recycling, automatic reset in preparation for the following cycle, or push button reset whenever desired. For full details, write:

VEEDER-ROOT INC.
HARTFORD 2, CONNECTICUT
Hartford, Conn. • Greenville, S. C. • Altoona, Pa. • Chicago
New York • Los Angeles • San Francisco • Montreal
Offices and Agents in Principal Cities

▲ For more details circle NED-489 K7 on enclosed inquiry slip ▲

▲ For more details circle NED-490 K7 on enclosed inquiry slip ▲



Cyclone hopper and volute assembly, 10' x 4' x 1", fabricated complete by Littleford.

LITTLEFORD

layout
shearing
punching
bending
flame cutting
assembly
welding
stress relieving
sand blasting
machining

Littleford's complete, top quality fabricating saves your time and facilities for your own specialty. Send us your blueprints for estimates on your requirements.

LITTLEFORD BROS., Inc.
Dept. LB-200,
453 E. Pearl St.,
Cincinnati 2, Ohio

▲ For more details circle NED-491 K7 on enclosed inquiry slip ▲

Spraying Systems' original design and precision manufacture make a world of measurable difference. Better spray nozzle performance results from improved control of such spray characteristics as volume, particle size, spray angle and distribution. For all the facts, just write for your copy of our forty-eight page Catalog 24.

SPRAYING SYSTEMS CO.
3211 RANDOLPH • BELLWOOD, ILLINOIS

ADVANCED SPRAY NOZZLE DESIGN FOR NEW DIMENSIONS IN CONTROL AND PERFORMANCE

▲ For more details circle NED-492 K7 on enclosed inquiry slip ▲

Give Your PROFITS a lift

with the
TIME SAVING
COST CUTTING

MOTO-TRUC

CB Trucks . . . 1,000 to 3,000 lbs. capacity

Everyone in Industry today is faced with the problem of maintaining normal profits in the face of steadily rising operating costs.

There is but one answer — keep costs down to the very minimum with the aid of modern equipment — with MOTO-TRUCS for instance.

Handling materials in factory or warehouse is a major cost item. That's where MOTO-TRUCS fit in. You can't beat them for efficiency, low cost of operation, simple construction, ruggedness and durability.

MOTO-TRUCS are made in a full range of capacities — from 1,000 to 10,000 pounds.

There is a "Walkie" or "Small Ride-A-Man" model for every handling need.

Write for Catalog No. 56W "Walkie" Trucks and No. 56R Rider Trucks.

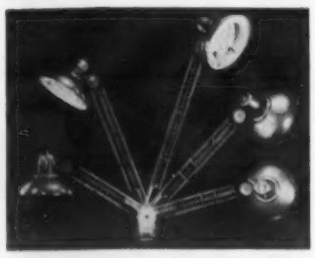
Builders Of The The First Walkie Truck

The MOTO-TRUC Co.
1961 E. 59th St. • Cleveland 3, Ohio
Pallet . . . Platform . . . Hi-Lift Trucks

Representatives in Principal Cities

▲ For more details circle NED-493 K7 on enclosed inquiry slip ▲

LIGHTING UNIT
gives incandescent-fluorescent light



Rotating, swinging, and extending to many positions, the Trombolite incandescent-fluorescent lighting unit provides illumination over working areas. It makes use of a circular fluorescent tube and can be used by draftsmen, engineers, inspectors, or office personnel. Prices range from $19.95 to $24.95. Made by **Amplex Corp.**, Dept. NED, 111 Water St., Brooklyn 1, N. Y.

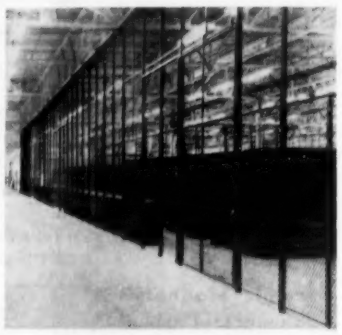
▲ For more details circle NED-494 K7 on enclosed inquiry slip ▲

PORTABLE CORD REELS
handle any size wire or cable

Adaptability to handle almost any size wire or cable is featured by NL-15 and NL-18 portable cable reels. Adjustable steel pins can be inserted to fit desired coil diameter, and lock-bearing is adjustable to any coil width. To load, one end of cord is pulled through opening in removable side plate, and cord is then coiled on reel. Model NL-15 measures 15 in. in diameter and handles 15 ft of 12/2 cord. Model NL-18 has 18-in. diameter and holds 250 ft of 12/2 cord. Capacity for other cord sizes varies accordingly. Made by **Hykon Mfg. Co.**, Dept. H, Box 923, Alliance, Ohio.

▲ For more details circle NED-495 K7 on enclosed inquiry slip ▲

WIRE PARTITIONS
standard models are mass produced



Each standard wire mesh partition panel is a complete interchangeable unit that can be easily disassembled and relocated as plant layout changes require. Partitions are available all - mesh or mesh with steel base. Standard units are 8 ft high and 4 or 5 ft wide. Greater height requirements are met by using standard 1, 2, 3, and 4-ft top panels. Accessories include hinged, sliding, and dutch doors; and service windows. Made by **Wire & Iron Products, Inc.**, 1727 16th St., Detroit 16, Mich.

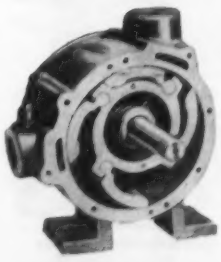
▲ For more details circle NED-496 K7 on enclosed inquiry slip ▲

Automate with AIR
(Vacuum—Suction—Pressure)

Countless automatic operations are handled faster, simpler, more economically with

LEIMAN
Rotary Air and
VACUUM PUMPS

- Lifting
- Holding
- Chucking
- Sorting
- Filling
- Separating
- Drying
- Feeding
- Mixing
- Many more



Send for 12-page Catalog and Application Book showing 60 "how-to-do-it" blue prints

Investigate the many uses and advantages of air for automatic operations—how other industries are using air—how you might use air. Your best source for such information is Leiman—with 60 years' background in the manufacture and application of air pumps. And the best pump for your job is a Leiman Air Pump for higher capacity—larger volume—trouble-free operation—longer life. Write for literature—outline your needs.

Many types and sizes:
Vacuums to 29.9" Hg.
Pressures to 20" psig.
Displacement to 162 c.f.m.

LEIMAN BROS., Inc.
167 Christie St., Newark 5, N. J.

▲ For more details circle NED-497 K7 on enclosed inquiry slip ▲

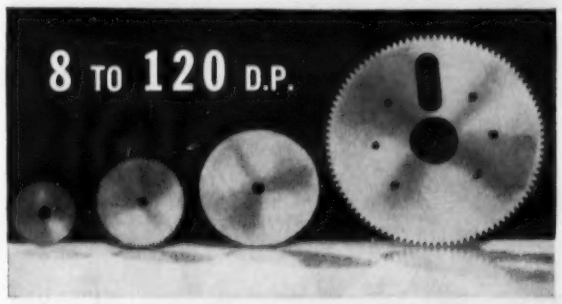
LITTELL AIR BLAST VALVES
Automatic ejection of pieces by using a short blast of air permits the operator to give his entire attention to loading the die, thereby saving time and increasing output.

LITTELL
PRES-VAC SAFETY FEEDERS
$35.00
. . . operate on a minimum of air—only 45 lbs. psi and handle parts from 2 to 10 lbs.
Prices F.O.B. Factory

SAVE MONEY • SAVE TIME • SAVE HANDS • SAVE FINGERS
No. 22157 Write for FREE Catalog!

AIR-VACUUM DIVISION
4169 Ravenswood Avenue, Chicago 13, Illinois
District Offices: Detroit and Cleveland

▲ For more details circle NED-498 K7 on enclosed inquiry slip ▲



LONG LIST OF STOCK GEAR DIES OFFERS YOU BIG SAVINGS!

ACCURATE STAMPED GEARS by *WINZELER* are BIG savers of time and money. Single stampings are laminated to wide faces at savings up to 60%! Further economies are made possible by a BIG range of *stock* Dies. Modern new plant, methods, and equipment now greatly increase production speed, efficiency and *economy!* Send blue prints. Tell us about your needs today. No obligation.

SEND FOR...
New list of WINZELER-made stock Gear Dies. Ask for it on company letterhead, *please!*

WINZELER Stamped Gears

WINZELER MANUFACTURING & TOOL CO.
7355 W. WILSON AVENUE • CHICAGO 31, ILLINOIS

▲ For more details circle NED-499 K7 on enclosed inquiry slip ▲

MAKE YOUR OWN SOUND MOVIES . . . THIS EASY, INEXPENSIVE WAY

Here, in one compact, portable unit is all you need to make your own sound movies.

This new Kodascope Pageant Sound Projector, Magnetic-Optical, is both a superb sound projector *and recorder.*

Take any kind of 16mm film, sound or silent, and have a magnetic striping added for about 2½¢ per foot. Then run it through your Magnetic-Optical and record *your* own sound.

Mix voice with music, add from other sound sources, record on the spot, blend automatically. Erase, alter, re-use the magnetic stripe at will. Change your message to fit special groups, as often as you wish.

And *project* every kind of 16mm film (sound or silent) with the same ease, brilliance, fine tone, and freedom from maintenance that you get from *every* Pageant.

Interested? Write for full details.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

▲ For more details circle NED-500 K7 on enclosed inquiry slip ▲

feature for feature...
THIS NEW SQUARE D VOLTAGE TESTER
Tops them ALL!

for further details, write Square D Company, 6060 Rivard Street, Detroit 11, Michigan

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

For more details circle NED-501 K7 on enclosed inquiry slip

OLSON WHEEL CONVEYORS
Multi-Purpose Low Cost...
RUGGED CONSTRUCTION

Olson Wheel Conveyors in lightweight steel or ultra-lightweight aluminum, offer you more material handling economy and efficiency for your money. Designed by conveyor specialists. Olson units have hundreds of uses around the plant—save steps, time, labor and handle your loads safer. Easily moved, set-up or stored. Many accessories available for special-purpose jobs. Standard straight and curved sections in 12" or 18" widths in stock for immediate shipment. Get our prices before you buy.

Write for catalog No. 4000. Contains complete information on Olson Wheel, Roller and Belt Conveyors.

OLSON CONVEYORS
SERVING AMERICAN INDUSTRY SINCE 1900
SAMUEL OLSON MFG. CO., INC.
2439 BLOOMINGDALE AVE.
CHICAGO 47, ILLINOIS
Offices in Principal Cities

For more details circle NED-502 K7 on enclosed inquiry slip

Quality Air Devices
COST SO LITTLE . . . SAVE SO MUCH!

Fig. 26
150 lb. Push-Button Air Nozzle

Fig. 1840PT
150 lb. Lever-Operated Air Nozzle

MINIMUM MAINTENANCE

Fig. 1571
Quick-Operating Valve for Air

With plant maintenance costs—and the cost of compressed air—at all time highs, it pays to install *the best air devices you can get* . . . available from your Lunkenheimer distributor. The Lunkenheimer Co., Box 360, Annex Station, Cincinnati 14, Ohio.

Fig. 1227
Pop Safety Valve for Air

L-457-19

LUNKENHEIMER
THE ONE *Great* NAME IN VALVES

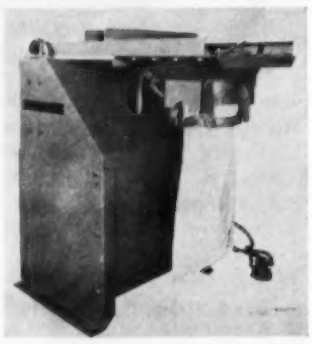
For more details circle NED-503 K7 on enclosed inquiry slip

MOTOR RESEARCH KIT
32 motor units can be assembled

All necessary motors, motor components, and gear reduction units to assemble 32 different servo, torque, or synchronous motors, with or without integral gear reduction, are contained in this Systems Development Motor Kit. Simplified manual gives all assembly instructions and contains complete motor performance data, including speed-torque curves. Kit includes popular Holtzer-Cabot R-24 and R-25 frame sizes. Any motor can be made up with only bench tools. Offered by **National Pneumatic Co.**, Holtzer-Cabot Motor Div., Dept. N, 125 Amory St., Boston 19, Mass.

For more details circle NED-504 K7 on enclosed inquiry slip

JOUNCING BAG PACKER
packs twelve 100-lb bags per minute



Vertical jouncing action of the G-73 Impacker tightly packs such materials as meals, mashes, hulls, and pulps in burlap, cotton, and jute bags. It operates without noise or vibration to provide smaller, more compact packages at up to twelve 100-lb bags per minute. Operator attaches the bags to an air-operated bag holder and, upon release of a foot pedal, clamps lock the bag to the spout and the jouncing action begins. After packing, bag is dropped onto a conveyer or sewing belt. Standard bag holders are equipped with quick-change clamps for attaching various size round or almond-shaped spouts. Made by **Richardson Scale Co.**, Van Houten Ave., Clifton, N. J.

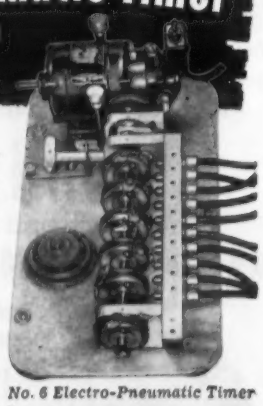
For more details circle NED-505 K7 on enclosed inquiry slip

Ceramic Magnets

Stackpole Carbon Co.—Specific uses of Ceramagnets in mechanical, electrical, and electronic applications are cited in 12-page bulletin RC-11A. Graphs plot magnetic characteristics of these high coercive force permanent magnets that are molded from low cost ceramic powders.

For more details circle NED-506 K7 on enclosed inquiry slip

THIS CLEVER, DEPENDABLE
Electro-Pneumatic Timer
Controls Intricate Work Cycles...



This simple but astonishingly ingenious unit distributes air pressure to air-operated cylinders, presses, hammers, work feeders, clamping fixtures, chip blowers, work ejectors . . . each independent as to start, duration and end of cycle. Simply connect up 6, 12 or more cylinders in numerous sequences from 2½ to 33½ seconds. *You need this inexpensive* Mead Electro-Pneumatic Timer for cost-saving automation jobs!

No. 6 Electro-Pneumatic Timer

Front view showing hook-up with four Meadmatic Valves

Write Factory or Nearest Mead Representative For Bulletin MA107
Write for our cost-saving catalog. Or let the Mead Man show you.

(See Volume IV Thomas' Register for nearest distributor's address, phone number.)

MEAD
SPECIALTIES COMPANY
4114 N. Knox Ave., Dept. MA107, Chicago 41, Ill.
PATHFINDER IN AIR POWER AUTOMATION

For more details circle NED-507 K7 on enclosed inquiry slip

CESCO...RIGHT—BEFORE YOUR EYES!

Now...CESCO gives you style, comfort and safety in new Plastic and Metal Frame glasses

• Smart styling combined with practical on-the-job utility are the features both you and your employees will like about these new open-type safety glasses by CESCO. Combination plastic and metal frame gives the appearance of attractive personal glasses, yet provides a durable, long-wearing frame in which lenses can easily be replaced.

All-in-one plastic section forms partial lens rim and comfort bridge pad—affords full closure at nose section to keep out foreign bodies. In 2 sizes: 46 x 39 mm (No. 326), 48 x 41 mm (No. 328). Lens shape: F-7 in clear, anti-glare safety glass and Cescolite plastic. 4 Bridge sizes: 20, 22, 24 and 26 mm.

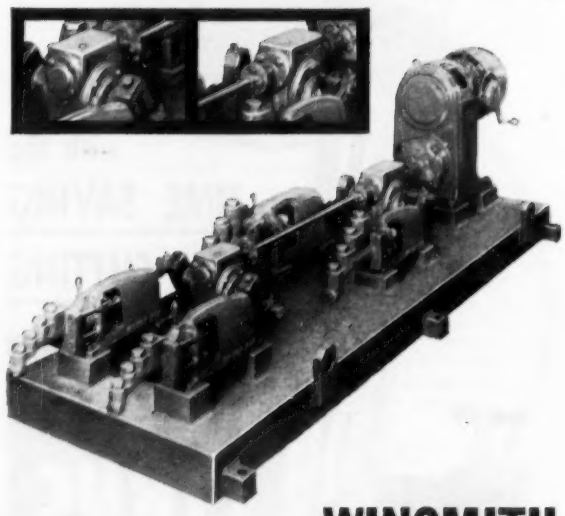
CHICAGO EYE SHIELD COMPANY
2715 West Roscoe Street • Chicago 18, Illinois

CESCO FOR SAFETY

ASK your CESCO Safety Equipment Distributor to show you these new plastic and metal frame safety glasses and the many other safety glasses and goggles in the CESCO line

For more details circle NED-508 K7 on enclosed inquiry slip

MILTON ROY CO.
considers "Quality" first



they use **WINSMITH SPEED REDUCERS**

● The Milton Roy Company uses Winsmith Speed Reducers for their precisely accurate, controlled volume pumps. These pumps are used in thousands of industrial installations where corrosive chemicals must be metered against positive heads to 25,000 pounds per square inch.

Winsmith Speed Reducers were selected for many reasons—their large overhurg load capacity, rugged construction, price advantage, good delivery and trouble-free performance in service. "Quality", however, tops the list. As Milton Roy explains it, "... one of the most important factors in our use of Winsmith Speed Reducers is that they best fit our standards of quality."

We'd like to show you all the advantages of standardizing on Winsmith Speed Reducers for every application from 1/100 to 85 H. P. For complete selection information and engineering data, write — on your company letterhead, please — for Catalogs 155 and SM-57.

WINSMITH
SPEED REDUCERS

WINSMITH, INC.
119 Eaton St., Springville (Erie County), N. Y.

For more details circle NED-509 K7 on enclosed inquiry slip

DRAVO COUNTERFLO

HEATER

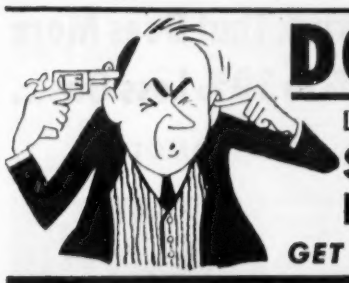
The new Dravo *Counterflo* forced-air space heater has these outstanding features:

New Discharge Plenum
New Airfoil Combustion Chamber
New Induced Draft Firing
New Pyrojet Burner
New Low Speed Fans

For complete information on the all-new Dravo *Counterflo* heater, write for Bulletin 564. Dravo representatives are located in principal cities.

DRAVO CORPORATION
Pittsburgh 22, Pa.

For more details circle NED-510 K7 on enclosed inquiry slip



DON'T LET YOUR **STRIPPING PROBLEMS** *GET YOU DOWN!*

EPOXYSTRIP

Is a LIFE SAVER—TIME SAVER—MONEY SAVER

A new more powerful paint stripper that outstrips all others! No organic finishes have yet resisted this amazing paint stripper. It was especially formulated to remove epoxies . . . with the same ease that it removes baked enamels, lacquers, etc. No stripping scum—clean rinsing!

SEND FOR FREE BROCHURE

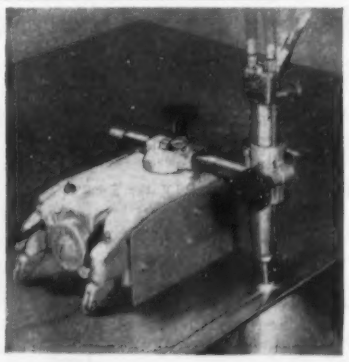
- EPOXYSTRIP WILL NOT HARM SOFT METALS
- ECONOMICAL—MORE JOBS PER GALLON AT LOWER COST
- NO SCRUBBING OR MANUAL ASSISTANCE
- RECOMMENDED BY LEADING FINISH MANUFACTURERS

JOBBERS: Beck EPOXYSTRIP sells on demonstration. Try it and see for yourself.

BECK EQUIPMENT COMPANY
3352 WEST 137th STREET CLEVELAND 11, OHIO

For more details circle NED-511 K7 on enclosed inquiry slip

SAVE TIME AND MONEY



with the ***OXWELD CM-45*** *Cutting Machine*

YOU SAVE TIME because the portable (29 lb.) OXWELD CM-45 will do your cutting, beveling, flame-treating, and even special welding jobs far faster than manual operations. This means *more* production in *less* time.

YOU SAVE MONEY because the CM-45 cuts gas consumption and assures superior cutting results. Rejects and costly finishing operations are eliminated.

Start saving today. Call your nearby LINDE Office for a demonstration, or write for OXWELD Catalog F-4487.

LINDE COMPANY 30 East 42nd Street New York 17, N. Y.
DIVISION OF UNION CARBIDE CORPORATION

"Linde" and "Oxweld" are trade-marks of UCC.

For more details circle NED-512 K7 on enclosed inquiry slip

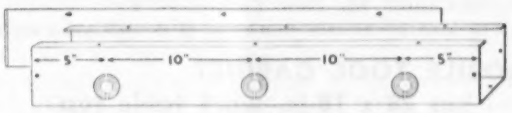
PLASTIC CORD PLUG
has molded-in pull handle

A flexible finger pull handle is integral part of this non-marring plastic cord plug, available on a variety of wire types and sizes in any color. Wire comes out of the side of the plug, which further makes pull-out of plug safe and nondestructive. Excess length of wire can also be kept off the floor by pushing several loops of wire into the handle opening. Plug is furnished on line cords by **Miller Electric Co.**, Dept. N, 120 Main St., Pawtucket, R. I.

For more details circle NED-513 K7 on enclosed inquiry slip

WIRING TROUGH
in 4 x 4-in. and 8 x 8-in. sections

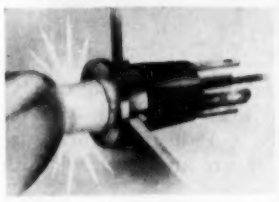
Added to line of 4 x 4-in. wiring troughs and fittings are 20 and 30-in. lengths, with concentric ½, ¾, 1, and 1¼-in. knockouts on 10-in. centers. Also offered



are 8 x 8-in. inside dimension troughs in 1, 2, 3, 4, and 5-ft sections with fittings. All of these sections are less knockouts except the 1-ft section which has concentric ½, ¾, 1, and 1¼-in. and ¾, 1, 1¼, and 1½-in. knockouts on opposite sides. The 1-ft sections can be used as junction boxes. All sections of both sizes have screw-on covers and are UL-approved. Made by **Wadsworth Electric Mfg. Co.**, Dept. D-R, Covington, Ky.

For more details circle NED-514 K7 on enclosed inquiry slip

ILLUMINATED SWITCHES
maximum diameter is ⅝ in.



Up to 225 Pan-i-Lite illuminated indicating switches can be mounted in a 1 sq-ft panel. Projecting less than 1 in. behind the panel, they have a maximum diameter of ⅝ in. Switches are suited for various low voltage indicating and control applications. Integral pushbutton bulb-lens assembly is quickly replaced from the front of the panel. Red, blue, green, white, and yellow colors are available in 6, 12, and 28-v switches. Indication can be seen at 180 degrees. Assembly has five external terminals, four of which are tabs and the other a 12-in. lead of No. 28 stranded wire. Mounting is in a 0.75-in. hole in panels from 1/16 to 3/16 in. thick. Made by **Alden Products Co.**, Dept. TS-78, 117 N. Main St., Brockton 64, Mass.

For more details circle NED-515 K7 on enclosed inquiry slip

For more details circle NED-516 K7 on enclosed inquiry slip

MARATHON ELECTRIC assures Customer Protection with KLIXON Motor Protectors

Marathon Electric Manufacturing Corporation, a leading producer of electric motors and generators, specifies and uses KLIXON Motor Protectors.

Marathon says of their oil burner motor: "*We feel it is of real value to our customers to mark the nameplate,* 'MOTOR EQUIPPED WITH MANUAL RESET THERMAL PROTECTORS . . . PUSH RED BUTTON TO RESET.' "

Now there's something new — in addition to famous KLIXON Protectors for single-phase motors, you can get full protection engineered into 3-phase motors with a single, built-in KLIXON Protector. For full details, write for Bulletin MOPR-1.

You, too, can help assure customer protection against burnouts, reduce service calls and repairs by specifying and using KLIXON Protectors. The additional cost is low, pays for itself over and over.

METALS & CONTROLS CORPORATION
Spencer Thermostat Division 3198 Forest Street, Attleboro, Mass.
KLIXON

For more details circle NED-517 K7 on enclosed inquiry slip

The Lepel line of induction heating equipment represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating.

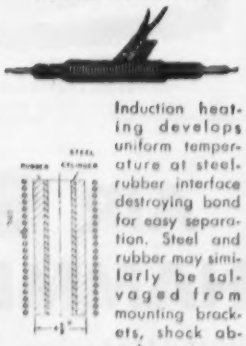
If you are interested in induction heating you are invited to send samples of the work with specifications. Our engineers will process and return the completed job with full data and recommendations without any cost or obligations.

TYPICAL INDUCTION HEATING APPLICATIONS

HARDENING DIESEL FUEL INJECTOR

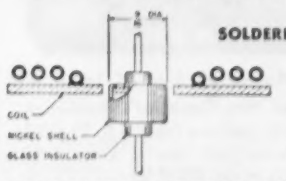
Restriction of heat to end of holder body for fuel injector permits hardening of face to provide required resistance to deformation without hardening the threads. Coil design shown provides uniform temperature for hardening despite holes in face.

REMOVING RUBBER FROM STEEL



Induction heating develops uniform temperature at steel-rubber interface destroying bond for easy separation. Steel and rubber may similarly be salvaged from mounting brackets, shock absorbers, etc.

SOLDERING TRANSISTOR ASSEMBLIES



Concentrator-type coil creates high intensity, restricted heating at joint of nickel shell and tinned glass, thus causing solder flow for permanent seal

Electronic Tube Generators from 1 kw to 100 kw.
Spark Gap Converters from 2 kw to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information.

All Lepel equipment is certified to comply with the requirements of the Federal Communications Commission.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

For more details circle NED-518 K7 on enclosed inquiry slip

INCREASE TRANSMISSION EFFICIENCY
...LENGTHEN BELT LIFE
...STOP SLIPPAGE

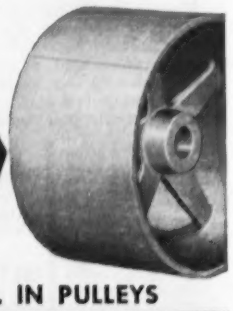
Condersite Lagging is a high-friction pulley surface that increases grip, permits more slack, prevents heating and cracking of belts, reduces belt maintenance and eliminates need for dressing.

Condersite Lagging is quickly, easily applied in your plant by your men. No heat, no bolts, no rivets. Long lasting. Trouble free. For Crown, Flat or Split Pulleys.

Complete information sent free on request. Write Condersite Engineering Corp., 2013 Chancellor Street, Phila. 3, Pa.

DISTRIBUTORS IN PRINCIPAL CITIES
A FEW DESIRABLE TERRITORIES AVAILABLE

CONDERSITE PULLEY LAGGING



PUTS THE P-U-L-L IN PULLEYS

For more details circle NED-519 K7 on enclosed inquiry slip

Looking for HARDNESS TESTING FACTS?

Get this free catalog

Send today for catalog containing complete details on all types of Brinell Hardness Testers . . . for laboratory, or production: Dead Weight, Hydraulic, Hand or Motor Operated, Large or Small, Standard and Special.

Since 1914
Steel City Testing Machines Inc
8819 Lyndon Ave., Detroit 38, Mich.

Sales Offices in all metalworking areas.
See STEEL CITY's exhibit, Metal Show Booth 1729

For more details circle NED-520 K7 on enclosed inquiry slip

BANTAM BULLY

AIR HAMMER
With Metering Trigger

Delivers 0 to 13,000 Controllable Blows Per Minute

Weighs only 20 oz. Measures Just 6" Long.

Bantam Bully Air Hammer has Superior's exclusive metering trigger—delivers anywhere from 0 to 13,000 completely controllable blows per minute. Uses only 6.5 cu. feet of air per minute at 90 P.S.I.

24 DIFFERENT TOOLS FOR
- Scaling
- Chiseling
- Peening
- Tamping
- Sheet Metal Cutting
- Paint Scaling
- Routing
- Caulking
- Pin and Key Driving
- Star Drilling
- Fender & Body Work
- Cleaning Molds

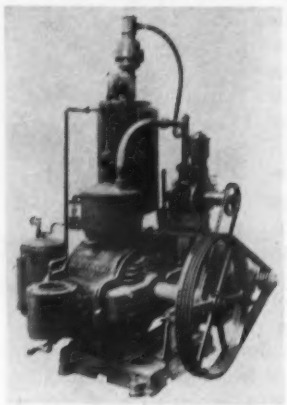
NEW HANDY SLIP CHUCK
Tools are positively locked, snap in or out easily, can be locked in 8 different positions.

For full details, write Dept. N-10.

SUPERIOR PNEUMATIC & MANUFACTURING, INC.
4758 Warner Road Cleveland 25, Ohio

For more details circle NED-521 K7 on enclosed inquiry slip

VACUUM PUMPS for wet and dry systems

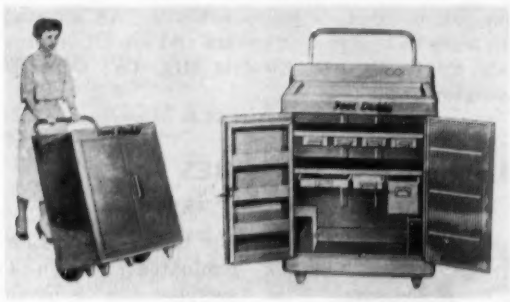


Two-stage vacuum pumps for both dry and wet systems have rated capacities from 28 to 880 cfm. Based on type RP rotary piston vacuum pump, unit consists of an integral high vacuum stage and a fore or backer stage, powered by a single motor. High vacuum stage has its own lubricant supply which is always under vacuum, remaining uncontaminated and degassed at all times. Exhaust is at a pressure low enough to prevent vapor condensation. Pump-down from atmospheric pressure is automatic. Pumps are capable of removing condensable vapors, yet maintaining a high pumping efficiency. Applications include chemical, drug, food packing, electrical and electronic, metallurgical, and other operations. Made by **Beach-Russ Co.**, Dept. 37, 50 Church St., New York 7, N. Y.

For more details circle NED-522 K7 on enclosed inquiry slip

MOBILE TOOL CABINET has 28 x 18-in. work table top and adjustable shelves, partitions

Double electric outlets for portable tools, full length piano-hinge doors with locking handles, adjustable handle bar, and interchangeable and adjustable



shelves and partitions are features of the Tool Caddy. The mobile tool cabinet and work table is a 35¾-in. high all-steel unit with a 28 x 18-in. top work surface. While standing, it is secure and level, with its wheels off the floor.

The 110-lb cabinet is pushed or pulled after tilting back on its 10 x 2.75-in. semipneumatic ball bearing wheels. Model 105TC (shown) contains six drawers with adjustable dividers and one pull-out bin. Model 115TC contains tray type drawers. Left inner door has removable shelves for mounting over bench or on counter top, while right inner door has perforated pegboard for hanging tools and other items. Made by **Simonsen Metal Products Co.**, 4450 W. Chicago Ave., Chicago 51, Ill.

For more details circle NED-523 K7 on enclosed inquiry slip

well-known aircraft manufacturer reports:

"HEATING TIME DECREASED 50%
HEATER LIFE INCREASED 75%!
with
WATLOW'S FIREROD
CARTRIDGE HEATING UNIT

"By using the firerod heater, the heating time was decreased by 50 per cent and the heater life was increased by at least 75 per cent with respect to the cartridge heater we were previously using".

"The decrease in heat up time required because of the concentrated heat of the Firerod has made it possible for us to remove the bolt from the crankshaft, a feat which was next to impossible before, since the bolt can be expanded away from the crankshaft before the heat is transferred to the crankshaft".

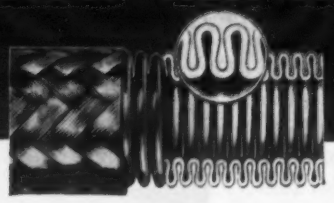
- New Design Offers AS MUCH HEAT IN 1/5th THE SPACE!
- Units from ⅞" to 12" long; ⅜" and ½" dia.

WRITE for free illustrated Bulletin. Full of convincing facts and figures.

WATLOW ELECTRIC MFG. CO.
Since 1922—Designers and Manufacturers of Electric Heating Units
1374 FERGUSON AVE.
SAINT LOUIS 14, MO.

For more details circle NED-524 K7 on enclosed inquiry slip

Everyday . . .
BETTER CONNECTIONS
are made with
FLEXON® REX-WELD



Why Flexon Rex-Weld? Because it offers you what you want—convenience, dependability and long life. Rex-Weld corrugated metal hose is available in stainless steel, steel, bronze and alloys. Sizes range from 3/16" through 24", I.D.—for burst pressures to 18,000 psi. For flex connections that assure economical service—your best bet is Rex-Weld. Write today for new Catalog 161.

RW-33

FLEXONICS CORPORATION
Formerly Chicago Metal Hose Corporation
1343 S. Third Avenue, Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-525 K7 on enclosed inquiry slip

Now, a Gas Truck That Does More Work on 25% to 30% Less Gas...

Automatic DYNAMOTIVE

The secret of Automatic DYNAMOTIVE'S (Series GLF) proved superior performance lies in its utter simplicity...an engine-driven variable voltage generator supplies electrical power to the drive motor direct coupled to the drive axle. This proved power train *without gears* eliminates slippage and power loss through heat build up. Additional gas mileage is achieved by the inherent over-drive and torque multiplying features of the electric power train. In addition...

Positive Inching Control...precise spotting gives faster, safer handling of loads.

Job Adjustable...directional control can be adjusted...on the job...for instant power or cushion-smooth take off.

Tilt and Lift Controls...optional for foot or finger tip operation.

Full Width Posture Seat...accessible from either side...reduces driver fatigue.

Visibility...high visibility of fork position throughout lifting range.

But, see for yourself.....

ask for a demonstration. No obligation...write today.

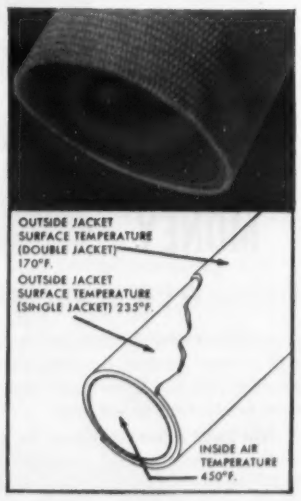
G.L.F. Capacities: 4,000 to 10,000 lbs. with solid tires...4,000 and 6,000 lbs. with pneumatics. Tractors available in 2,500 and 3,500 lbs. draw bar pull. Factory service available in over 100 cities.

AUTOMATIC TRANSPORTATION CO.
Division of The Yale & Towne Mfg. Co.
Dept. T-7, 61 W. 87th St., Chicago 20, Ill.
WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

For more details circle NED-526 K7 on enclosed inquiry slip

NEW QUAKER HOSE for hot air ducting

Made in continuous lengths up to 50', this new hose easily withstands temperatures as high as +450°F; as low as −80°F. Its synthetic fabric jacket and silicone tube retain temperatures from upstream to downstream end . . . cut heat loss up to 57%. Lightweight and fully flexible, the hose resists abrasion. Available in either single or double jacket, and in 1" to 4" I.D.'s. Sizes 1" and 1¼" I.D. can be made in 30' continuous lengths; 1½" to 4" I.D. in 50' lengths. The hose takes regular expansion and shank hose couplings.



For more information, write:

H. K. Porter Company, Inc., Quaker Rubber Works, Philadelphia 24, Pa., or Pioneer Works, Pittsburg, Calif.

H. K. PORTER COMPANY, INC.
QUAKER RUBBER DIVISION

For more details circle NED-527 K7 on enclosed inquiry slip

Transfer Fluids Fast

— LIKE GAS IS PUT IN YOUR CAR!

THE NAME IS FAST-FLO! It's Graco's light-weight air-powered pump that transfers fluids fast, "direct-from-drum"!

Just stick the Fast-Flo in the drum, attach plant air line. Open gasoline type valve at end of hose to start pump. Close valve, and pump stops. One-man operation, with absolute control *at the valve.*

Safest operation possible! No motor burnouts or sparking! No danger in hazardous atmospheres! No pressure built up inside the drum!

For the fastest dispensing and transferring you've ever experienced, find out about Graco Fast-Flo Pumps. WRITE FOR NEW IDEA BOOKLET!

SEE YOUR LOCAL INDUSTRIAL DISTRIBUTOR

GRACO *Fast-Flo* "DIRECT-FROM-DRUM" PUMPS

GRAY COMPANY, INC. • *Engineers and Manufacturers*
107 Graco Square, Minneapolis 13, Minnesota
FACTORY BRANCHES: New York (Long Island City) • Philadelphia • Detroit Chicago • Atlanta • Houston • San Francisco

▲ For more details circle NED-528 K7 on enclosed inquiry slip ▲

there are many types and sizes of screws . . .

. . . and many types and sizes of Apex tools to drive them

APEX—authority on fastening—offers the most complete range of screwdriving tools, and every one is designed for a specific screwdriving application.

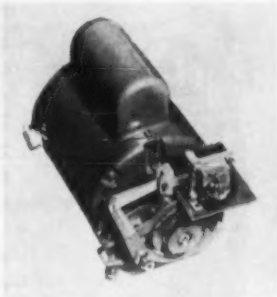
If you drive Phillips, Frearson (Reed & Prince), Slotted, Clutch Head or Socket Head screws, you can reduce your fastening costs with Apex Screwdriving Tools. Write for Catalog 25 (Magnetic Tools) or Catalog 21 (Standard Tools).

Ask **APEX** *for the answer to your fastening problem!*

THE APEX MACHINE & TOOL COMPANY
1046 S. Patterson Blvd. • Dayton 2, Ohio

▲ For more details circle NED-529 K7 on enclosed inquiry slip ▲

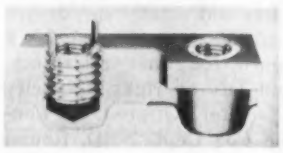
SOLENOID BRAKE-DRIVE
fits fractional horsepower motors



Designed primarily for holding duty on equipment which has overloads, this combination solenoid brake and drive fits shafts of most ¼ to ¾-hp motors. It can be supplied for any voltage and current, and drive can be by means of pulley, sprocket, sheave, or coupling. Made by **Robot Appliances, Inc.,** 7043 Orchard, Dearborn, Mich.

▲ For more details circle NED-531 K7 on enclosed inquiry slip ▲

THREADED INSERT
self-locking, for soft materials

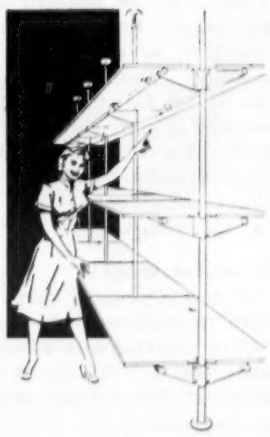


Strong internal thread for bolt attachment in such soft materials as aluminum and magnesium alloys and plastics is provided by the Keensert self-locking threaded insert. In harder metals, it provides a self-locking internal thread in a blind hole. The one-piece, all-metal unit can be screwed by hand into holes prepared with standard drills and taps. Mechanical resistance to rotation is provided by the Keensert Kees which are tightly fastened in the Keensert and pressed into the base material with a small punch or hammer. Internal self-locking arrangement securely grips bolt after about one diameter of thread engagement. Made by **Newton Insert Co.,** Dept. A, 6500 Avalon Blvd., Los Angeles 3, Calif.

▲ For more details circle NED-532 K7 on enclosed inquiry slip ▲

ADJUSTABLE SHELVING
shelf depths from 24 to 96 in.

Adjusto Deck shelving which consists of vertical piping and adjustable brackets, can be set at almost any spacing. Need for special tools and pipe threading or bolting is eliminated. Pipe fits in flange on floor. Similar flange on top of pipe is adjustable to fit tightly against ceiling. Flanges are not fastened to either surface, facilitating dismantling and re-use. Brackets attached to vertical pipes hold horizontal pipes to which are fastened 24 to 96-in. deep plywood shelves. Pipe and shelving can be purchased locally. Made by **Walter Haertel Co.,** 2842 Fourth Ave. S., Minneapolis, Minn.



▲ For more details circle NED-533 K7 on enclosed inquiry slip ▲

CUT HANDLING COSTS • • • STOCK MORE IN LESS SPACE

Low-Cost Flexible Stackbin System Saves Space, Time and Labor

Stackbin®-Stackrack® Combinations are the ideal way to minimize parts, tools, materials handling. Stackbins are portable containers, so you can carry materials throughout your process without transferring contents to any other container. Stored in Stackracks, every Stackbin is instantly accessible when *it's* needed. You never disturb another bin. Hopper fronts on Stackbins provide visibility and accessibility to the materials. Available in 7 sizes, Stackbin-Stackrack Combinations make most efficient use of floor space. With inexpensive Adapters any small units can be stacked on larger units. Related items can be kept in one place. Individual units lock together: no tools, no setup time needed.

WRITE FOR NEW CATALOG

All Stackbin Products Sold Direct
STACKBIN CORPORATION
1081 Main St., Pawtucket, R. I.

Mfgd. and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

STACKBIN SYSTEM
"Stacked and Still Accessible"

▲ For more details circle NED-534 K7 on enclosed inquiry slip ▲

GET THE MONEY-SAVING FACTS COVERING THESE

NEW LOW COST

FREEWAY
OMEGA-TYPE
BEARINGS

You'll find the practical answer to your commercial ball bearing problems . . . in the new Freeway Omega-Type line. For here is a complete selection of semi-precision bearings, in a wide variety of design and load combinations . . . at prices that will amaze you.

Included in the standard and semi-standard range of Freeway Omega-Type bearings are thousands of radial and thrust units (flanged and unflanged), single and double race rollers, pre-lubricated bearings, dust-sealed assemblies and others . . . for low R.P.M. application on shafts ⅛" - 1" in diameter.

Our new engineering catalog, just off the press, covers sizes, types, metals, load ratings and other essential data in ready reference form. Your request for a copy, on either your company letterhead or the coupon below, will receive our immediate attention.

Gentlemen: Send us your Bearing Catalog pronto.

Company _____
Street _____
City _____ Zone ____ State _____
Signature _____

Freeway WASHER & STAMPING COMPANY
P. O. Box 1756, Cleveland 5, Ohio

▲ For more details circle NED-535 K7 on enclosed inquiry slip ▲

For $73.00 Or Less*... You get the same convenience that used to cost hundreds of dollars!

SUNROC

COOLER-HOT

PATENTS PENDING

COOLER-HOT is safe, sanitary, and low cost. It *instantly* dispenses just-right hot water for up to 60 cups per hour. Grey, hammertone enamel cabinet is a compact 31" x 10" x 7", and has attractive stainless steel base and top with chrome plated glass filler.

INSTANT HOT DRINKS
inside your plant and office

- Eliminates the need for costly, combination, hot and cold coolers!
- Easily connects to inlet water line of any make pressure cooler, or to ordinary water outlet!

*ONLY $55.50, f.o.b. Glen Riddle, Pa., if ordered with any standard Sunroc Cooler.

LIST PRICE $73.00, f.o.b. Glen Riddle, Pa.

SUNROC FILTER-PAK®
. . . another cost-saver!

Only 10½" high, this compact filter/purifier removes bad taste, odor, and color from drinking water.

Small in size and price—FILTER-PAK out-performs units costing up to four times more!

Furnished with mounting bracket for easy connection. LIST PRICE, *ONLY* $19.50 f.o.b. Glen Riddle, Pa.

SUNROC CORPORATION—Division M—Glen Riddle, Pa.
Check which and PLEASE PRINT
☐ Payment enclosed, plus applicable taxes, for ☐ COOLER-HOT ☐ FILTER-PAK
☐ Send literature on ☐ COOLER-HOT ☐ FILTER-PAK

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

ORDER NOW *or request literature*
IMMEDIATE DELIVERY ON PRE-PAID ORDERS

▲ For more details circle NED-530 K7 on enclosed inquiry slip ▲

REVCO Sub-Zero Chests

- for shrink fits
- for seasoning gauges and tools
- for testing • for research
- for processing to −140°

Model RSZ503 Rivet Cooler (shown) equipped with 90 rivet canisters, temperatures to −30° F. 110V, 60 cycle, single phase.

Model SZH153 with temperatures to −95° F. 110V; 60 cycle, single phase.

Model SZH653, larger capacity, temperatures to −85° F. 110V, 60 cycle, single phase.

Model SZHC657. Same capacity as SZH653 but attains temperature as low as −140° F. 220V, 60 cycle, single phase.

Refrigeration: Model SZHC657 operates with 3 Tecumseh hermetic compressors in a two system cascade. Other Sub-Zeros use 2 hermetics in a two stage system. Rivet Cooler operates with single hermetic unit. All models equipped with efficient fan-cooled condensers — no liquid coolant required. *Write Today for Full Specifications and Prices.*

Description	Model	Cu.Ft.	Temp. Range		Outside Dim.			Inside Dim.		
			Rm. 70°	Rm. 110°	L	W	H	L	W	H
Sub-Zero	SZH153	1.5	−95° F.	−85° F.	42"	28"	42¼"	23"	9"	12½"
Sub-Zero	SZH653	6.5	−85° F.	−75° F.	60"	28"	42¼"	47"	15"	16"
Sub-Zero	SZHC657	6.5	−140° F.	−125° F.	60"	28"	42¼"	47"	15"	16"
Rivet Cooler	RSZ503	5.0	−30° F.	−20° F.	42"	28"	41"	30"	16"	18"

REVCO, Inc.
Setting Trends in Refrigeration since 1935 — Deerfield, Michigan

▲ For more details circle NED-536 K7 on enclosed inquiry slip ▲

ANOTHER *Safety-Tested* PENETONE PRODUCT

SAFETY SOLVENT FORMULA 602

Really Safe Solvent Cleans, Dries Like Lightning!

sprays, dips, wipes machinery, electrical equipment

NO OTHER SOLVENT GIVES YOU ALL THIS

Completely cleans and dries super-fast. No second rinse ever required • No residue, no strong odor • Non-corrosive, low, low foxicity, non-conductive • Doesn't damage painted surfaces • Reduces fire risk • Accepted by U.S. Coast Guard (Permit No. 346).

MAKES ALL THESE OLD FASHIONED

Replaces Carbon Tet — Formula 602 replaces ever-deadly fumes with a solvent that is far less toxic to workers under any conditions (24 times safer). Does a superior cleaning and drying job in one operation — at a lower cost than Carbon Tetrachloride.

FORMULA 602 — ALIVE

Ten rats inhaled 125 parts Formula 602 under identical conditions. After 14 days all rats alive, healthy.

CARBON TET — DEAD

Ten rats inhaled 125 parts carbon tet per million air-parts. In two separate 30 minute periods, all dead!

Replaces Other Safety Solvents — High, constant purity of Formula 602 guarantees lowest odor and no residue. Most rigorous tests assure greatest safety ever! Yet costs less than others.

Replaces Gasoline, Kerosene, Naphtha, Paint Thinner, Other Cheap Flammables — Low-cost Formula 602 virtually eliminates fire risk (certified safe for use aboard U.S. Navy ships). Superior performance.

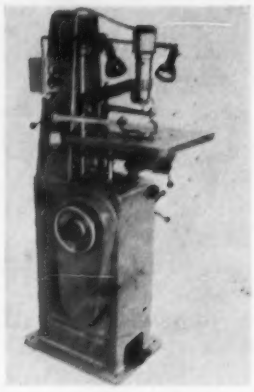
WRITE FOR FREE BULLETIN F-602

THE **PENETONE** CO.
Dept. E710, 74 Hudson Avenue, Tenafly, New Jersey

Liquid Detergents and Degreasers • Industrial Strippers • Electrical Equipment Cleaners • Powdered Cleaners and Degreasers • Floor Finishes and Waxes • Automotive Products • Corrosion Inhibitors

▲ For more details circle NED-537 K7 on enclosed inquiry slip ▲

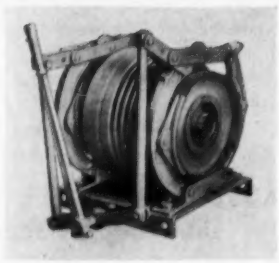
TOOLMAKING MACHINE for tool steels and carbides



Rotary and reciprocating motions are available simultaneously on the Roto Recipro toolmaking machine. It is suited for machining all types of tool steels, carbide form cutting tools, contoured tungsten carbides, and hardened steels. Machine utilizes diamond tools, carbide files, grinding points, and carbide burrs. Conventional tension and compression filing and sawing, and honing are obtainable through use of an interchangeable file bracket. Reciprocating motion is infinitely adjustable from 85 to 500 strokes per minute, and rotary speeds are rheostat-controlled up to 45,000 rpm. Fluted 18 x 18-in. work table is chromed for wear resistance, and tilts front or back and left or right. Capacity is to center of a 22-in. diameter. Offered by **Connecticut Tool & Engineering Co.**, Dept. NED, Round Hill Rd., Fairfield, Conn.

▲ For more details circle NED-538 K7 on enclosed inquiry slip ▲

SPEED REDUCTION PULLEY includes clutches and interlock



Shaft-mounted Hart reduction pulley has internal planetary gearing for speed reductions up to 8000 to 1, and two internally reduced speeds. Both of the latter may be in the same direction, or one forward and one reverse. Speeds are controlled by two mechanical clutches mounted on a base and operated by a common lever which provides the interlocking operation. Lever can be adapted to hydraulic or pneumatic operation. Power can be from V-belts of any type and size, or adaptation for chain or gear drive is possible. Designed for horizontal or vertical use, the sealed unit has hardened gears and ball bearings running in oil. Sizes available are 12, 18, 20, and 24-in. diameters with ratings up to 120 hp. Made by **Hart Reduction Pulley Co.**, Dept. N, 426 W. Main St., Waukesha, Wis.

▲ For more details circle NED-539 K7 on enclosed inquiry slip ▲

Precision Gages

Federal Products Corp.—32-page catalog 57D deals with Dimensionair air gages and accessories. Gages can be supplied with magnifications of 1250:1, 2500:1, and 5000:1. Air plugs cover sizes from 0.093 to 6.26 in. Counterbore and blind hole models are described also.

▲ For more details circle NED-540 K7 on enclosed inquiry slip ▲

Convair helps improve plant hygiene with SBS-30 waterless skin cleanser

In this ultra-modern plant are produced many of Democracy's air defenses. Here, too, is achieved an ultra-modern plant hygiene program with the help of SBS-30 Waterless Skin Cleanser.

To maintain cleanliness on this priority production, Convair has installed SBS-30 Waterless Skin Cleanser dispensers in "difficult soil areas". SBS-30 affords this fast, safe and thorough "on-the-job" way of cleaning that requires no water, plumbing or complicated installation.

Wherever they are installed, SBS-30 Waterless Skin Cleanser dispensers help Convair to produce savings through greater "on-the-job" efficiency. Man-hours are saved by reducing the number of trips to distant wash areas. The incidence of industrial dermatitis is reduced through improved personal hygiene.

Why don't you, like Convair and hundreds of other industrial leaders, take a serious look at SBS-30 Waterless Skin Cleanser. WRITE TODAY—we'll rush complete, detailed literature.

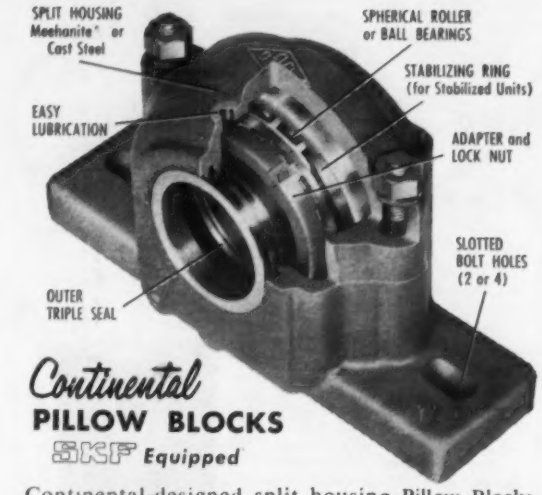
Write Dept. 57-J6

SBS sugar beet products co.
SBS WATERLESS WASHSTATION*
"Brings the Washroom to the Worker" *

MAIN PLANT: 302 Waller St. Saginaw, Michigan
Los Angeles, California • Newark, New Jersey
CANADIAN SUBSIDIARY: Chemical By-Products, Ltd., 22 Racine Road, Rexdale, Ontario, Canada

*Trademark

▲ For more details circle NED-541 K7 on enclosed inquiry slip ▲



Continental **PILLOW BLOCKS**
SKF Equipped

Continental-designed split housing Pillow Blocks, equipped with either ball or roller bearings, to meet specific demands of modern industry. Made in all standard sizes from 1 15/16" to 8" shaft size. Triple sealed against dust and dirt to insure life of bearing. Require minimum lubrication attention and will give many years of dependable operation.

Write for complete details —

INDUSTRIAL DIVISION CONTINENTAL GIN COMPANY
BIRMINGHAM, ALABAMA
CGC — ATLANTA, MEMPHIS, CLEVELAND, MOBILE, DALLAS, NEW YORK 17, KNOXVILLE

▲ For more details circle NED-542 K7 on enclosed inquiry slip ▲

if

IF larger motor is necessary to start machine than required to run it.

If special motors or controls are used because of heating problems due to frequent starting or long starting periods because of high WR^2.

If shock start will break mechanism or work and a softer start is required.

If dual drive with automatic coupling of standby prime mover is required.

IF your answer is yes to any of these questions you need a RAWSON COUPLING, the centrifugal clutch that is as "simple as a handshake." Remember: Starting a load with the new RAWSON is like starting a motor without any load.

RAWSON COUPLING DIVISION
O. S. WALKER CO., Inc.
WORCESTER, MASS.

▲ For more details circle NED-543 K7 on enclosed inquiry slip ▲

FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from ⅛ pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *106 Cambridge St., Burlington, Mass.*

▲ For more details circle NED-544 K7 on enclosed inquiry slip ▲

SOLVE "TOUGH" PARTS PROBLEMS WITH Colonial's SILICONE RUBBER

There's practically no end to the usefulness of silicone rubber as a material for making rubber parts. It won't melt or harden at 500 deg. F., won't conduct electricity, is not affected by sun, water or weather, and even dry ice can't freeze it. These and many other desirable properties which can be obtained through Colonial's expert compounding, make silicone rubber the most likely material for solving your "tough" parts problems.

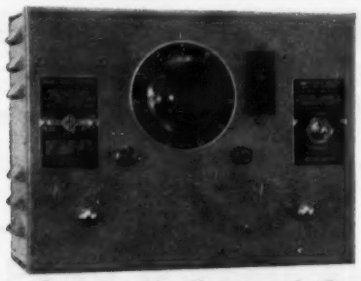
Whether you are designing new products, or improving existing ones, contact Colonial Rubber Company for details on the advantages of fabricating more efficiently and *profitably* with silicone rubber. Our service is complete . . . you can call on us for any one or all three of the following:

EXPERT COMPOUNDING
ACCURATE PRODUCTION
QUICK DELIVERY

1967

COLONIAL RUBBER CO.
RAVENNA, OHIO

For more details circle NED-545 K7 on enclosed inquiry slip



Really Smooth Speed Control of D-C Motors from A-C Lines

Variac® Motor Speed Controls Feature:

- ★ Wide Speed Range — from zero to full rated speed
- ★ Full Torque at ANY Speed
- ★ No Torque Pulsation even at lowest speed
- ★ High Starting Torque
- ★ Extra Fast START-STOP-REVERSE — dynamic braking on most models
- ★ Instant Start — no electronic tubes — no warm-up time
- ★ Fifteen models for controlling motors from 1/15th hp and less to 1½ hp

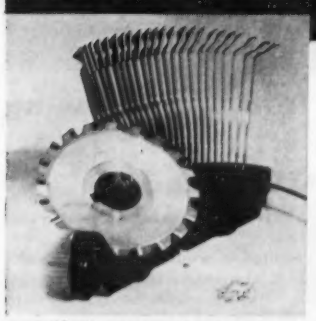
Write for Variac® Motor Control Bulletin

GENERAL RADIO Company
275 Massachusetts Avenue, Cambridge 39, Massachusetts, U.S.A.

Broad Avenue at Linden, Ridgefield, N. J. NEW YORK AREA — 1000 N. Seward St. LOS ANGELES 38
8055 13th St. Silver Spring, Md. WASHINGTON, D. C. — 1150 York Road, Abington, Pa. PHILADELPHIA
1182 Los Altos Ave., Los Altos, Calif. SAN FRANCISCO — 6605 W. North Ave., Oak Park, Ill. CHICAGO

For more details circle NED-546 K7 on enclosed inquiry slip

If You Can See It — You Can SAW IT with a GAY-LEE "THINSAW"



Slotting typewriter type bar segment.

Solve problems in high-precision slitting, slotting, sawing with Gay-Lee carbide-tipped Thinsaw! Wafer-thin for the most delicate work with positive alignment and rigidity that avoid run-out . . . but retaining the speed and long life of carbide. Patented construction holds tips firmly.

Patented — manufactured under license
Stronger Braze — Circular Seat

- THIN AS .030"
- DIAMETERS UP TO 12"

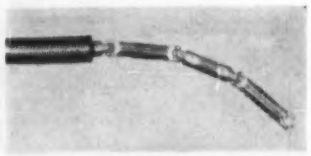
Complete Line of Saws for Any Application—To Any Tolerance

WRITE FOR FULL INFORMATION

GAY-LEE COMPANY
CLAWSON • MICHIGAN

For more details circle NED-547 K7 on enclosed inquiry slip

FLEXIBLE DRIVE OR CONTROL
link shaft transmits high torque

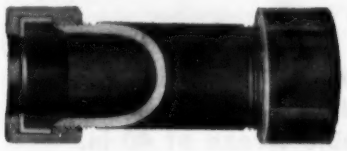


Adaptable for either drive or remote control applications, Flexible Link shaft transmits torque in either direction. It is available in unlimited length and equal flexibility in sizes from ⅜ to 3-in. diameter. Torque ratings range from 50 to 25,000 lb-in. On drives at speeds of 1750 rpm, a ¾-in. shaft transmits 1 hp. Links consist of trunnion blocks and two half-links connected with screws or rivets. Covers are available in a variety of materials including armored neoprene, nonmetallic hose, and semirigid tube. Made by **Clark Flexible Link Shaft Co.**, Box 73-F, Newton Highlands 61, Mass.

For more details circle NED-548 K7 on enclosed inquiry slip

COMPRESSION COUPLINGS
for connecting small pipe lines

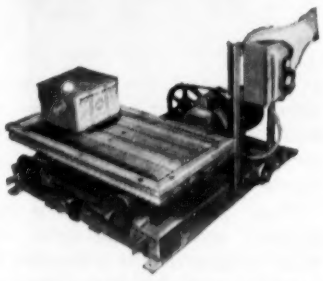
Two compression nuts with integral retaining rings and gaskets, and one steel sleeve comprise these compression couplings for small pipe lines carrying water, oil, gases, or chemicals. Easily installed without thread cutting or exact pipe fitting, the couplings withstand internal pressures in excess of 3000 psi. Various metals and gasket materials are offered in sizes from ¾ to 2 in. IPS. Made by **Joslyn Mfg. & Supply Co.**, Wm. E. Pratt Foundry Div., 155 N. Wacker Drive, Chicago, Ill.



For more details circle NED-549 K7 on enclosed inquiry slip

VIBRATION TESTER
pretests fragile items for shipping

Compact, bench-type model 50-V vibration tester is intended specifically to pretest fragile articles to determine possible shipping damage. This Parcel-Prover simulates travel conditions to show up weaknesses in packaging of glassware, ceramics, lamps, small appliances and delicate assemblies. Both the 1-in. thick hardwood table, which is supported on structural steel base, and rear drive shafts are mounted on heavy ball-bearing, self-aligning pillow blocks. Eccentrics on front and rear drive shafts control table throw. Tester is equipped with safety guards and ¼-hp motor with all necessary controls. Made by **Gaynes Engineering Co.**, 1652 W. Fulton St., Chicago 12, Ill.



For more details circle NED-550 K7 on enclosed inquiry slip

FREE

You will find Superior Bulletin 44 a valuable reference for your tubing files. Here are tips on fabrication (flaring, machining speeds, lubricants, etc.); chemical analyses; physical and mechanical properties; tolerances; sizes and lengths. The advantages of titanium tubing in aircraft and in manufacturing heat exchangers are thoroughly covered in a section on applications.

ALL THE NEWEST DATA ON TITANIUM TUBING

We pioneered in the development of small diameter titanium tubing. We now produce it in two grades of commercially pure titanium, A-40 and A-55, in sizes ranging from .012 to 1⅛ in. OD, in both seamless and Weldrawn® (welded and drawn) forms.

For your free copy of Bulletin 44, write to Superior Tube Company, 2018 Germantown Ave., Norristown, Pa.

Superior Tube
The big name in small tubing
NORRISTOWN, PA.

All analyses .010 in. to ⅝ in. OD—certain analyses in light walls up to 2½ in. OD

For more details circle NED-551 K7 on enclosed inquiry slip

DA PRODUCTS SINCE 1910

SPONGE RUBBER for—

- Pads
- Cushions
- Gaskets
- Mountings, etc.

TELL US YOUR NEEDS. Durkee-Atwood offers prompt sampling service on *uniform cellular structure* sponge rubber. Available in three densities . . . soft and medium (3/32" to 1" thick) and firm 3/32" to ½" thick) . . . in standard 36" width.

TELL US YOUR SCHEDULE. Durkee-Atwood offers prompt shipping service to meet production requirements.

DOR-TITE
Sponge rubber stripping for solving countless problems. All sizes.

FREE SAMPLES—Write on your letterhead for samples of DOR-TITE and/or SPONGE RUBBER. Dept. NE-10

DURKEE ATWOOD V-BELTS

DURKEE-ATWOOD CO. MINNEAPOLIS 13, MINN.

For more details circle NED-552 K7 on enclosed inquiry slip

ANOTHER NEW Safety-Tested PENETONE PRODUCT

Rust, Scale, Grease STRIPPER

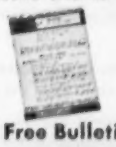
PENESOLVE 814

Entirely New!

Non-acid Solvent STRIPS RUST, and Grease in One Operation!

Won't attack iron or steel
NO CORROSIVE FUMES • NON-TOXIC

Amazing new Penesolve 814 thoroughly removes carbon, grease, sludge, while dissolving rust and scale completely. It contains no acid, yet strips rust right down to bare iron and steel — and then stops! No acid danger to precision equipment or general parts — no corrosive fumes to affect personnel and metals of other equipment in the area — no gases to be vented! You never need expensive stainless steel or glass-lined equipment for handling Penesolve 814. And you can use it in any dip tank. Bulletin P-814 shows you why there's absolutely no pitting, no corroding, no hydrogen embrittlement to weaken metals. Exclusive alkaline formula attacks calcium scale in boilers, thick rust on automobile parts or equipment. At the same time, it also removes a multitude of stubborn deposits. What's more, unlike acid rust removers, Penesolve 814 will not give off dangerous, toxic fumes. Write for free, fact-packed Bulletin P-814



Free Bulletin P-814 gives all details. Write today!

PHOTOGRAPHIC PROOF OF SAFE, EFFECTIVE ACTION

Penesolve 814 — Acid-Type Strippers

Before — metal is thick with rust — covered by sludge, grease.

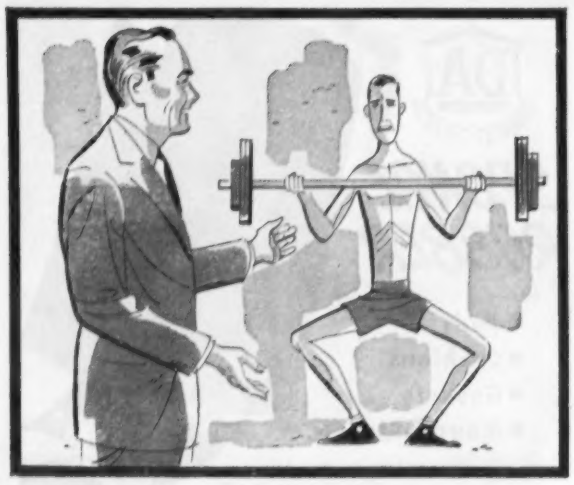
After — rust is dissolved completely and safely — without pitting or other harm to metal.

Damage — metal weaker due to pitting, corroding, hydrogen embrittlement, breaks rather than bends!

THE PENETONE CO.
Dept. E810, 74 Hudson Avenue, Tenafly, New Jersey

Liquid Detergents and Degreasers • Industrial Strippers • Electrical Equipment Cleaners • Powdered Cleaners and Degreasers • Floor Finishes and Waxes • Automotive Products • Corrosion Inhibitors

For more details circle NED-553 K7 on enclosed inquiry slip



ELECTROLIFT solves our hoisting problems

Wide selection of dependable worm drive hoists with capacities from ¼ to 10 tons . . . compact . . . close headroom . . . precise control. Consult your local ElectroLift representative or write for complete catalog.

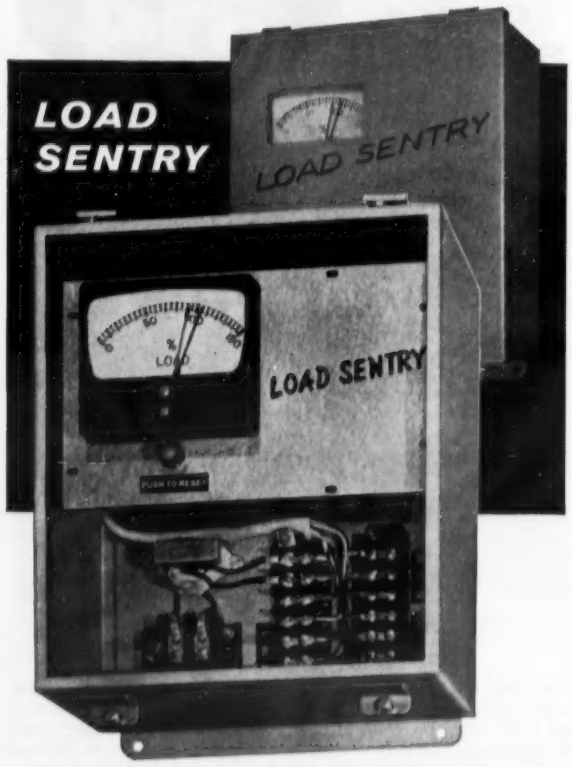
ELECTROLIFT

4657

204 SARGEANT AVE., CLIFTON, N. J.

For more details circle NED-554 K7 on enclosed inquiry slip

NEED OVERLOAD PROTECTION?



Load Sentry, NEMA 12 Housing, price $226.00

With one pointer, you set the load limit anywhere on the dial. Another pointer shows running load on the motor. If an overload occurs, these pointers meet and a protective circuit is energized, or feed rate is changed, or the motor is shut down, as preferred.

EASY TO INSTALL: Eight easy connections to make—any plant engineer, electrician or maintenance man can do it.

ACCURATE: Meter-relay "heart" is able to detect two pieces of stock moving through a progressive die; 2% load increase will trigger protective circuit.

SAFE: After overload, an interlock prevents start-up until overload is cleared and reset button is pressed.

FAST: Shutdown or alarm is virtually immediate if overload occurs.

UNAFFECTED BY STARTING SURGE: No false shutdown while motor is drawing heavy starting current.

TO ORDER: Specify motor full load current; or horsepower, voltage, and phase.

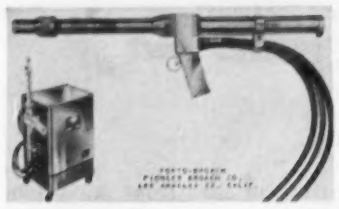
Ask for Data Sheet 7-A

ASSEMBLY PRODUCTS, INC.
75 Wilson Mills Road • Chesterland 61, Ohio
Telephone: (Cleveland, Ohio) HAmilton 3-4436 and 3-4446

Booths 217-218, NATIONAL ELECTRONICS CONFERENCE, Oct. 7-9, Sherman Hotel, Chicago

For more details circle NED-555 K7 on enclosed inquiry slip

PORTABLE BROACHING TOOLS use hand held gun type puller

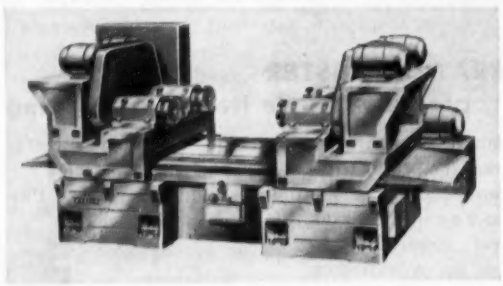


Round holes from 3/16 to 1½ - in. diameter, as well as other shapes, may be broached in perfect alignment with tolerances held as close as ±0.0002 in. with Porto-Broach portable broaching machines. Stock removal up to 1/32 in. in a 2½-in. length of cut can be obtained in a single pass using Heli-Kut broaches. Hand-held gun type broach puller broaches assemblies in position without fixtures or bushings. Caster-mounted 12¼ x 15¼ x 25-in. cabinets house a self-contained hydraulic power unit driven by a 110/220-v ac motor. The gun can also be mounted on side of cabinet for conventional pull broaching operations. Model PM2509 has a pulling capacity of 5000 lb with a 9½-in. stroke. It handles 3/16 to ⅝-in. diameter broaches. Model PM5009 develops 10,000 lb of pull, has a 9½-in. stroke, and accommodates ¾ to 1½-in. broaches. Made by **Pioneer Broach Co.**, Dept. NED-1, 6434 E. Telegraph Rd., Los Angeles 22, Calif.

For more details circle NED-556 K7 on enclosed inquiry slip

BORING MACHINES single and double-end models have maximum table stroke of 40 in.

Precision boring, turning, facing, grooving, and chamfering operations can be performed singly or in combination on two standard boring machines, offered



in single and double-end models. They have the same features of smaller Ex-Cell-O machines, plus the extra power, size, and rigidity for machining large and bulky parts or for simultaneous operations on a number of parts.

Style 2440 double-end model has two bridges to support spindles and drive equipment. The 54-in. wide bridges mount a number of spindles, and can be spread apart for large workpieces or moved close together for fast operating cycles on smaller parts. Maximum length of table stoke is 40 in., and table fixture pad is 28 x 46 in. Single-end style 1440 is identical, except that its only bridge is mounted on the left end. Made by **Ex-Cell-O Corp.**, 1216 Oakman Blvd., Detroit 32, Mich.

For more details circle NED-557 K7 on enclosed inquiry slip

For lower snagging costs...

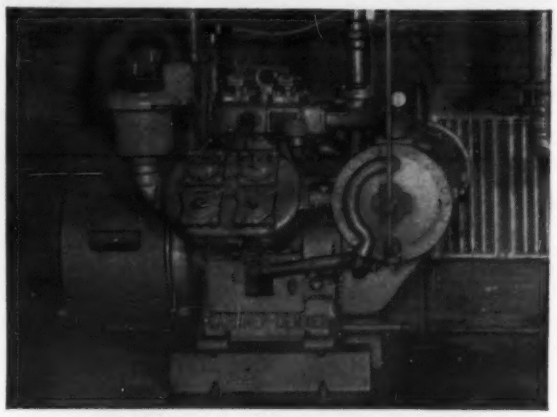
ATLANTIC *"Job-Mated"* GRINDING WHEELS

Time and again snagging costs have been reduced by the following ATLANTIC ABRASIVE formula: (1) a thorough analysis of specific snagging operations; (2) "mating" the grinding wheel characteristics to the job requirements.

RESULTS. Because ATLANTIC Resinoid-Bonded GRINDING WHEELS are "job-mated," they have a smooth, floating action that requires less pressure, thereby reducing operator fatigue, and they cut cleaner, faster and run cooler on job after job . . . reducing costs to a minimum. Prove it for yourself. Call your nearby ATLANTIC representative or write direct. Atlantic Abrasive Corp., 504 Pearl St., South Braintree, Mass.

ATLANTIC ABRASIVE CORP.
South Braintree 85, Massachusetts

For more details circle NED-558 K7 on enclosed inquiry slip



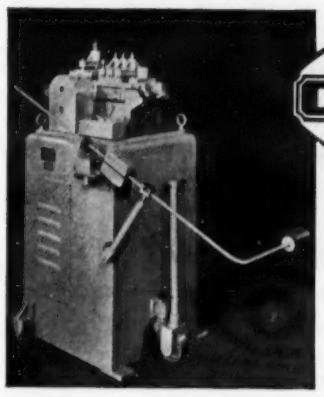
Small space compressors with piston displacement from 142 to 1150 cfm

Gardner-Denver WB vertical compressors save your floor space without sacrificing high air output. Water-cooled, these compressors are ideal for long, steady runs. They're easily installed; bolt down and hook up—and you're ready to go! No special foundation needed. Write for complete details.

ENGINEERING FORESIGHT—PROVED ON THE JOB IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING

GARDNER-DENVER
Gardner-Denver Company, Quincy, Ill.
In Canada: Gardner-Denver Company (Canada) Ltd., 14 Curity Avenue, Toronto 16, Ontario

For more details circle NED-559 K7 on enclosed inquiry slip



Model PDS-4½ U. S. Power Driven Straightener suitable for material up to 4½" wide, ⅛" thick, with variable speed drive, loop control mechanism, and casters for portability.

★ **U. S. PRODUCTS**
Slide Feeds
Roll Feeds
Stock Straighteners
Stock Reels
Stock Oilers
Coil Cradles
Wire Straighteners
Die Sets
Multi-Slides (R)
Multi-Millers (R)

US PRODUCTS

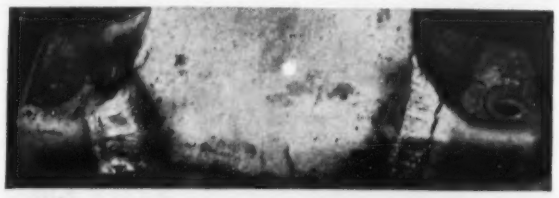
REDUCE PRESS-ROOM COSTS

Improve your press operations and reduce costs with units such as the Model PDS-4½ Power Driven Straightener. Successful press operations depend on a number of factors including the press, die, feeding mechanism and condition of the stock. The presence of "coil set" in the stock can result in lost production and expense due to jam-ups and breakage. The addition of a U. S. Straightener to the set-up can help you gain the full benefits from the use of coil stock — increased production and reduced costs. The unit illustrated is just one of a range of sizes and types we manufacture.

Your inquiries are invited.
Ask for Bulletin 125N

U. S. TOOL COMPANY, Inc.
AMPERE (East Orange) NEW JERSEY

For more details circle NED-560 K7 on enclosed inquiry slip



Cracked cast iron motor casing welded with Ni-Rod "55" ...$8,000 saved!

When supports of a digester drive motor cracked, production in a Canadian paper mill halted.

A new casting and lost production would cost over $8000!

How about repairing the cast iron supports? Welding Engineers Limited, of Montreal, said it could be done—with Ni-Rod* "55"* electrodes. The company used only 40 pounds of Ni-Rod "55" electrode to do the job. And the digester was back in operation the next morning. Total cost of the repair: $325.

Emergency repairs—and production welding, too—are fast and simple with Ni-Rod "55" electrode. No special equipment. No new training for weldors. Arc is stable and slag removal easy. Most jobs require no preheat.

Repair Cast Iron Parts Quickly and Easily gives illustrated examples of the many jobs you can do with Ni-Rod "55" electrode. For your copy, just write. Or circle the number below on the NED inquiry slip.

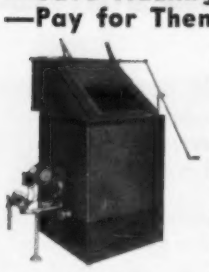
*Registered trademark

INCO THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York 5, N. Y.

INCO WELDING PRODUCTS
Electrodes — Wires — Fluxes

For more details circle NED-561 K7 on enclosed inquiry slip

INDUSTRIAL INCINERATORS
—Save Hauling Charges
—Pay for Themselves in 6 to 12 Months!



Model C-2-20 With incinerator burner

Save more than the price of a Winnen Incinerator! Eliminate those monthly charges for hauling refuse.

Avoid fire hazards and reduce your fire insurance premiums. Why take chances of spontaneous combustion, carelessly tossed cigarettes or matches?

Winnen heavy-duty incinerators burn wet refuse, dry or mixed. Your choice of fuels. No fuel needed to burn refuse 80% dry. Guillotine door is oversized for quick loading of cartons and crates.

Winnen incinerators can be installed indoors or out, take up little space. Combustion chamber is lined with heavy refractory material to withstand temperatures of 3000° F. Shell is heavy 10-gauge steel. Optional equipment is available, such as prefab chimney, automatic fuel control, etc.

Four styles, Model C is available in 4, 10, 15, 20 and 30 bushel sizes. Ideal for burning refuse that is free from smoke and odors. Model C-2 and Model S are available in four sizes. The new Custom Wincinator is built in any size, on order. The C-2, S and Custom lines are equipped with secondary combustion chambers for smokeless-odorless operation. Ideal for use in municipalities where smoke and odor must be eliminated. They conform to the most rigorous building codes. All Wincinators are fully guaranteed one year.

Models C and C-2 are shipped knocked down with complete, easy-to-follow directions for installing. Any handy man can set up a Wincinator. No mason needed. Easy to relocate later if you wish.

Also available is a complete line of Prefab Chimneys. Send for further information. Write today to: **Winnen Incinerator Co.**, 932 Broadway, Bedford 10, Ohio. *Advt.*

▲ For more details circle **NED-562 K7** on enclosed inquiry slip ▲

Fastest way to address cartons

Here's a way to address cartons that puts less modern methods to shame. Inexpensive, paper stencil is cut on a typewriter—separately or as by-product of shipping paper-work. It's then attached to small handprinter to imprint addresses directly on containers within "label frames" that have been pre-printed on the cartons by the carton manufacturer. Fast, clean, very inexpensive.

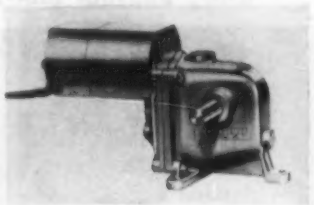
1 of 7 shipment addressing ideas described in new 16-page booklet. Send free copy

Weber

Weber Marking Systems
Div. of Weber Addressing Machine Co., Inc.
Dept. 21-J
Mount Prospect, Ill.

▲ For more details circle **NED-563 K7** on enclosed inquiry slip ▲

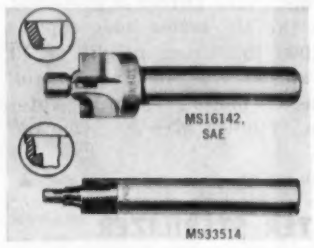
GEARMOTOR
lightweight unit has six ratios



Weighing less than 5½ lb, the model VW-3 gearmotor is equipped with a 1/15, 1/10, or 1/6-hp universal electric motor, wired for instant reversing. Unit is stocked in six ratios from 1787:1 to 52:1, producing up to 450 lb-in. of torque. Output speeds at full load range from 2.8 to 100 rpm. Overall length is 8¾ in. Precision cut gears are enclosed in a die cast zinc housing and are lifetime-lubricated. Special ratios and voltages can be specified. Made by **Von Weise Gear Co.**, Dept. 1, 9353 Watson Industrial Park, St. Louis 19, Mo.

▲ For more details circle **NED-565 K7** on enclosed inquiry slip ▲

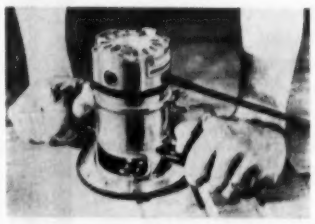
TUBE CONNECTOR CUTTERS
profile holes in work for fitting



These two carbide-tipped port contour cutters will provide the proper shapes in hydraulic components to accept the recently approved MC33514 flareless tube connector and the MS16142 internal O-ring boss for straight-thread tube fittings. Complete contour is formed as tool is fed into a drilled hole. Thirteen diameters are available for fittings used with ⅛ to 2-in. diameter tubing. Made by **Sonnet Tool & Mfg. Co.**, 578-NED N. Prairie Ave., Hawthorne, Calif.

▲ For more details circle **NED-566 K7** on enclosed inquiry slip ▲

ROUTER
has micrometer depth adjustment



Speeds range up to 22,000 rpm in this 1-hp heavy duty router, a direct-drive tool with micrometer-type depth adjustment for accurate jointing and cabinet work. Heavy duty ball bearings are permanently lubricated and sealed, and the collet-type chuck is tightened by two wrenches. Level top supports it in an inverted position, leaving operator's hands free to adjust cutter depth, or to change or sharpen bits and cutters. Large side handles are set low for balance. Depth adjustment is calibrated for 0 to 1 in., in 1/64-in. graduations, with a total vertical feed of 1½ in. Almost 100 different bits and cutters are available, as are several combination kits and attachments. Made by **Black & Decker Mfg. Co.**, Dept. R, 762 E. Pennsylvania Ave., Towson 4, Md.

▲ For more details circle **NED-567 K7** on enclosed inquiry slip ▲

Compactness . . . it's the big difference in

Compactly designed Link-Belt geared flexible couplings weigh less . . . cost less . . . have greater bore capacity than other comparable flexible couplings. Also, they're exceptionally rugged . . . capably handle shock, pulsation, reversing loads. For facts, contact your Link-Belt sales office or authorized stock-carrying distributor. Or write for Folder 2775.

POPULAR-SIZED, finished-bore geared flexible couplings are available packaged, ready for installation.

LINK-BELT
GEARED FLEXIBLE COUPLINGS

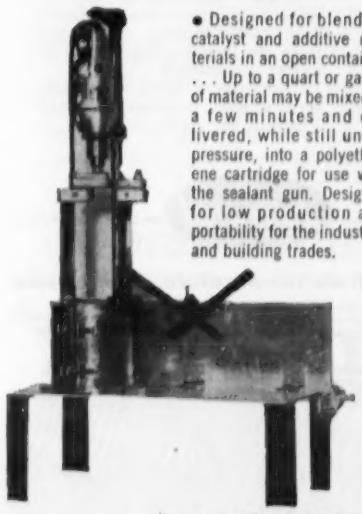
LINK-BELT COMPANY: Dept. N. E. D., Prudential Plaza, Chicago 1, Ill.

14,900

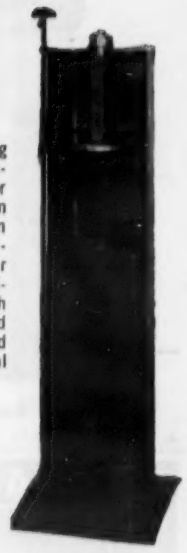
▲ For more details circle **NED-568 K7** on enclosed inquiry slip ▲

Pyles
PORTABLE MIXING AND FILLING UNITS

Pyles-SEMCO
SEALANT GUN
CAPACITY
2½ oz., 6 oz., 12 oz.



• Designed for blending catalyst and additive materials in an open container . . . Up to a quart or gallon of material may be mixed in a few minutes and delivered, while still under pressure, into a polyethylene cartridge for use with the sealant gun. Designed for low production and portability for the industrial and building trades.



AVAILABLE IN ONE QUART AND ONE GALLON SIZES

Automatic Continuous
BLENDOMETER
metering and mixing polyurethenes; epoxies, polyesters

Multi-Purpose Pumps
•
Metering and Measuring Devices
•
Hydraulic Hose Machines & Couplings
•
Conveyor Lubricators
•
"Tip-Seal" Flow Guns & Nozzles

• The Pyles Blendometer is a production unit suitable for continuous measuring and mixing of two and three part chemical systems. Chemicals, which will gravity flow, can be metered to a mixing head through variable control metering units which can be adjusted with very high accuracy. Unit measures 36" x 21" x 29½" high. Weight 500 lbs.

PYLES INDUSTRIES, INC.
8926 SECOND AVENUE · DETROIT 2, MICHIGAN

▲ For more details circle **NED-569 K7** on enclosed inquiry slip ▲

"One man with hammer" quickly assembles Ackermann BAND-BOX

PATENT APPLIED FOR

1. *Band-Box components nest on space-saving pallet.*
2. *Two sides go into place in first assembly step.*
3. *Third side is added. Clip fastener holds sides securely.*
4. *Stack-Lock Corners fasten to sides, completing assembly.*

Here's the ideal solution to shipping and storage problems. It's the Ackermann Band-Box, a collapsible, steel shipping container that assembles with clips quickly, positively *—without rushing!*

Stack it—it's self-palletizing. *Ship it*—it's strong, rugged. *Store it*—it's painted, bonderized, available with full cover. Can be knocked down quickly and parts nested for fast return. For full details on the Band-Box (with Stack-Lock Corners, as shown, or full cover), contact Ackermann Manufacturing Company, (Subsidiary of Wheeling Steel Corporation), Wheeling, West Virginia.

IT'S WHEELING STEEL

WHEELING STEEL

▲ For more details circle **NED-564 K7** on enclosed inquiry slip ▲

Why pay more?

Compare the quality of these low-cost DUO-FAST Foot-Power Staplers

You'll make up cartons far faster with a DUO-FAST Foot-Power Stapler. Post model . . . handy, portable.

You can pay up to $50 more and still not match the quality of these DUO-FAST Foot-Power Staplers. The reason: tubular steel construction. Makes 'em sturdy, yet light—just 38 lbs. Real time-savers . . . ideal for shipping rooms, large and small.

Choose from 3 models:

POST MODEL (as shown)—for stapling bottoms of cartons.

STRAIGHT ARM MODEL—for stapling telescopic cartons, corrugated inserts and fillers.

TABLE MODEL—for various automatic tacking jobs.

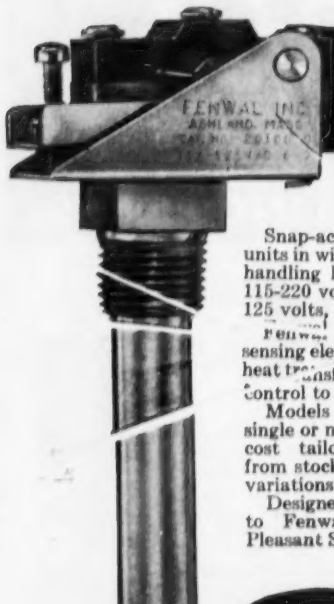
Free service: Priced at about $85, these foot-power tools compound your savings with DUO-FAST's famous Free Service Guarantee. Send today for free Bulletin FP-30 on DUO-FAST Foot-power tools.

FASTENER CORPORATION,
3758-60 River Road, Franklin Park, Ill.

DUO-FAST
Staplers · Tackers · Staples

▲ For more details circle NED-570 K7 on enclosed inquiry slip ▲

THERMOSTAT BOSSES SIZABLE ELECTRICAL LOADS WITHOUT RELAYS.



CAN YOUR INDUSTRY USE IT?

Snap-action THERMOSWITCH® units in wide use without relays, handling loads up to 20 amps, 115-220 volts A.C., or 10 amps, 125 volts, D.C.

Fenwal design of liquid-filled sensing element assures minimal heat transfer path, fast response, control to within ±2°F.

Models available to control single or multiple circuits. Low-cost tailor-mades assembled from stock parts. Thousands of variations possible.

Designers — write for details to Fenwal Incorporated, 810 Pleasant St., Ashland, Mass.

Fenwal

Controls Temperature . . . *Precisely*

▲ For more details circle NED-571 K7 on enclosed inquiry slip ▲

FOR MAXIMUM SAFETY

all over your plant use Safety **GRIP-STRUT**

Pat. Pending

the new basic material, all in one piece (including channels), not welded, riveted or expanded in steel or aluminum, in standard sizes and gauges. Safety GRIP-STRUT presents an open space, in a diamond pattern, in excess of 55% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.

Important Safety Features

- ★ Fire proof
- ★ Slip proof
- ★ Maximum strength
- ★ Minimum weight
- ★ Easy to stand on
- ★ Cool in summer — warm in winter

Big Economy Features

- ★ For balconies—no extra light needed below—no extra heat.
- ★ No extra supports necessary—channels are integral part of the material
- ★ No secondary sprinkler heads needed
- ★ Self-cleaning
- ★ Cut and installed like lumber by your own maintenance force
- ★ Low in original cost

Distributors in all principal cities. Consult yellow pages in phone book under "GRATING."

Write for Catalog

PRODUCTS DIVISION
THE GLOBE COMPANY • *Manufacturers since 1914*
4002 S. PRINCETON AVE. • CHICAGO 9, ILL.

▲ For more details circle NED-572 K7 on enclosed inquiry slip ▲

MASTLESS LIFT TRUCKS lift 12,000-20,000 lb up to 10 ft using unusual elbow-arm linkage

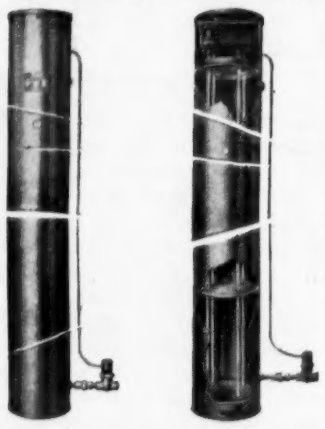
Good operator vision and considerable savings in vehicle weight result from eliminating the mast assembly on Elbolift industrial electric fork lift trucks. Their 48-in. over-all width and two 16-in. wide tires provide good load distribution and stability. A built-in load retraction feature and low-slung battery and counterweight also contribute to stability.

Lifting arm is mounted on a fixed pivot at the rear, as in bucket loaders, and also offers a 10-degree back and 5-degree forward tilt to facilitate tiering. Manually adjusted forks are standard, and hydraulically adjusted forks are optional. Driver is protected on all sides. Trucks in the MF series have capacities from 12,000 to 20,000 lb, lifting height of 10 ft, four speeds forward and reverse, inching control, and silicone-insulated Class H motor. Made by **Automatic Transportation Co.**, 149 W. 87th St., Chicago 20, Ill.

▲ For more details circle NED-573 K7 on enclosed inquiry slip ▲

ULTRAVIOLET WATER STERILIZER electrically and automatically purifies 9600 gallons per day

Badly polluted water supplies can be purified to public health standards by model S ultraviolet water sterilizer. No taste or odor is added, and valuable minerals present in good water are not destroyed or lost. Unit exposes water to powerful ultraviolet rays, including the essential wave length of 2537 Angstrom units. It can purify up to 9600 gallons of water a day.



Four 60 in. long ultraviolet tubes extend through the 12 in. diameter by 72 in. high stainless steel tank. Baffles at various levels guide incoming water close to these glowing cold cathode tubes to assure 100 per cent purification. Safety device prevents drawing of untreated water from sterilizer under any conditions, while a flow limiter prevents water being drawn faster than it can be purified. Made by **Sepco Corp.**, 862 Cross St., Pottstown, Pa.

▲ For more details circle NED-574 K7 on enclosed inquiry slip ▲

PAINT SPRAY BOOTH A PROBLEM? . . . Here's an easy, economical solution

Photo Courtesy Lawrie Wagon & Carriage Ltd., Winnipeg, Canada

. . . . With R P Paint Arrestors

Here's another example of the adaptability of R P Paint Arrestors. This space-saving, economical installation is typical of the versatility of R P Paint Arrestors—bring the advantages of increased efficiency—minimum floor-space requirements, maintenance and down-time—all at lower cost. Check the use of inexpensive, replaceable R P Paint Arrestors for your plant—and save all ways.

WRITE FOR FREE BOOKLET

Helpful, informative suggestions to solve your spray booth problems. Write today.

RESEARCH PRODUCTS CORPORATION
DEPT. 32, MADISON 10, WIS.

RP . . . PRODUCTS OF RESEARCH

▲ For more details circle NED-575 K7 on enclosed inquiry slip ▲

THIS BOX DO

1. PRODUCTION. Combined with Union Metal positioning stand this box provides automatic work-level positioning of material. Eliminates old-fashioned stoop-stretch-bend methods.

2. UNIT LOADS. Transfer, storage, stacking with fork truck . . . just like ordinary skid boxes.

3. DUMPING. Hinged drop-bottom feature automatically discharges parts or scrap quickly and with perfect control.

In addition, Union Metal offers industry's broadest line of conventional type material handling containers. Write for complete catalog information. Address The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Material Handling Equipment

▲ For more details circle NED-576 K7 o

"We avoided costly service calls and saved our customers irritating shutdowns . . . *by equipping welders we sold with Fusetron Fuses"*

Frank Korinek,
Owner, SUN RAY ELECTRIC COMPANY
CHICAGO, ILL.

Mr. Korinek continues . . . "About a year ago my motor rewind shop bought 22 welders for resale from a surplus dealer.

"They were 300 ampere arc welders, with the A.C. motor directly connected to a 300 ampere D.C. generator. The motor has a speed of 3500 R.P.M. and a nameplate rating of 56 amperes at 220 volts.

"The welders were equipped with 60 amp., 250 volt fuse clips. However, when we ran the welders in the shop, we found that ordinary 60 amp. fuses would blow on the starting current of the motor.

"We then tried 60 ampere Fusetron dual-element fuses. They proved to hold the starting current and to give the needed protection to the motor and generator.

"We are glad we had th in our own shop and insta fuses before selling the we wise, we would have ha costly unnecessary servi run the risk of losing cust

"As it happens, our c satisfied with the perforn welders and we haven't l call or complaint about blows."

***Play Safe!* Install FUSETRON Fuses and BUSS Hi-Cap Fuse**

▲ For more details circle NED-577 K7 o

SKF

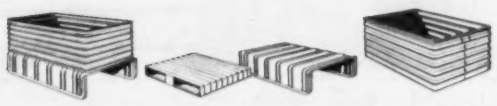
EVER
Ball B
Cylind
Spheri
Taper

SKF INDUSTRIES INC.,

▲ For more details circle NED-578 K7

DOES 3 JOBS!

THE WORK-O-MATIC*



*Patent No. 2,445,038

e NED-576 K7 on enclosed inquiry slip ▲

glad we had this experience
hop and installed Fusetron
selling the welders. Other-
ould have had a flock of
cessary service calls and
of losing customers.

ppens, our customers are
h the performance of the
we haven't had a service
plaint about needless fuse

FUSETRON dual-element FUSES do more than eliminate needless blows. They give 10 point protection not available with any other type of protective device.

DON'T RISK LOSSES! One needless shutdown . . . one lost motor . . . one destroyed switch or panel . . . one burned out solenoid . . . may cost you far more than replacing every ordinary fuse with Fusetron dual-element fuses. Write for bulletin FIS.

BUSSMANN MFG. DIVISION
McGraw-Edison Co.
University at Jefferson
St. Louis 7, Mo.

FUSETRON
TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION
BUSS

Hi-Cap Fuses throughout entire Electrical System!

le NED-577 K7 on enclosed inquiry slip ▲

SOS*?

Bearings needed in a hurry?
Don't panic, keep calm, don't worry
Call on the fastest, reliable source
An **SKF** distributor, of course.

Stocking all bearing and accessories,
He is factory trained for emergencies
With his door always open for an SOS
Look for the sign reading **SKF**. 7741

*Situation Of Stress

EVERY TYPE—EVERY USE

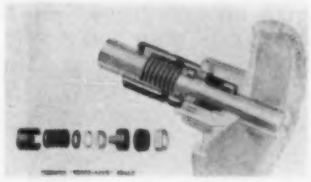
Ball Bearings
Cylindrical Roller Bearings
Spherical Roller Bearings
Tapered Roller Bearings ("Tyson")

Reg. U.S. Pat. Off. Tyson Bearing Corporation

STRIES INC., PHILADELPHIA 32, PA.

cle NED-578 K7 on enclosed inquiry slip ▲

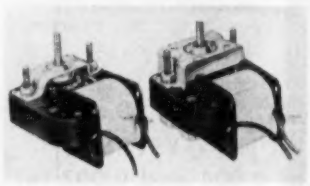
MECHANICAL SEALS have interchangeable parts



Line of Wedge-Lock external and internal mechanical seals features interchangeable parts for any given shaft size. An exception is the stator bushing, identical in size and shape, but of different materials. Seals are suited for use on pumps handling acids, caustics, and other liquids and slurries at −80 to 500° F, from vacuum to 100 psi. Seal faces are always within the stuffing box, eliminating dangerous spray hazards. Flushing, cooling, and/or lubricating can be supplied on all seals. Made by **Chemical & Power Products, Inc.**, Dept. ND-1, 11 Broadway, New York 4, N. Y.

▲ For more details circle NED-579 K7 on enclosed inquiry slip ▲

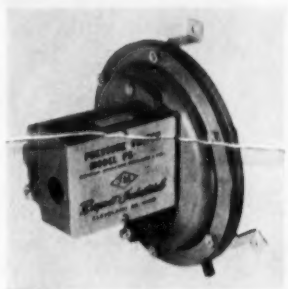
SHADED-POLE MOTORS feature long-life lubrication



Camel bearings employed in Series 402 shaded-pole motors assure practically lifetime lubrication and positive oil circulation even under high temperatures. Thus, motors are suited for use in out-of-the-way locations. Twelve models have output ratings from 1/600 to 1/40 hp, and all operate on 115-v 60-cycle ac. No-load speeds are 3400 to 3750 rpm. Made by **Controls Co. of America,** 9570 Soreng Ave., Schiller Park, Ill.

▲ For more details circle NED-580 K7 on enclosed inquiry slip ▲

PNEUMATIC PRESSURE SWITCH will close a 1200-w circuit



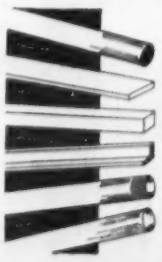
Adaptable to many control and safety functions, this pneumatic pressure switch will close a 1200-w circuit under preselected pressure, suction, or pressure differential over range from 0.1 in. water to 1 psi. Unit can be used to prove presence or absence of pressure, vacuum or flow of air, and inert or combustible gases. It finds use in automated process control, checking vacuum or pressure in electronic tube making, and controlling gas combustion systems. Buna N-nylon diaphragm enclosed in large pressure chambers acts against adjustable spring pressure to trip sensitively mounted mercury switch. Interchangeable springs adapt switch to 0.1 to 0.5, 1.0 to 10, and 4 to 30-in. pressure ranges. Made by **Bryant Industrial Products Corp.**, Dept. D, 17700 Miles Ave., Cleveland 28, Ohio.

▲ For more details circle NED-581 K7 on enclosed inquiry slip ▲

1 MAN + 1 BENDER

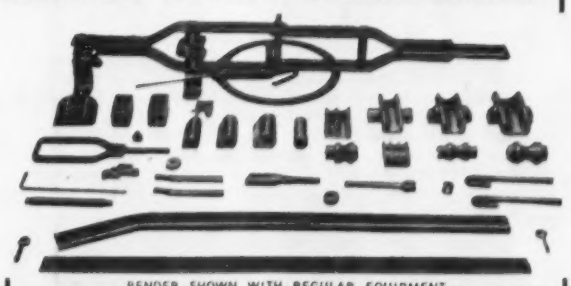
- Wrenchless, ready to use.
- Practical, quickly set up.
- Adaptable, replaces special equipment.
- Versatile, 141 different dies available.
- Dependable, a must for maintenance, limited production.
- Invaluable, optional equipment makes jobs easier.

BENDS THESE:



ROUNDS
FLATS
SQUARES
ANGLE IRON
PIPE
TUBING & CONDUIT

HOSSFELD UNIVERSAL® IRON BENDER



BENDER SHOWN WITH REGULAR EQUIPMENT

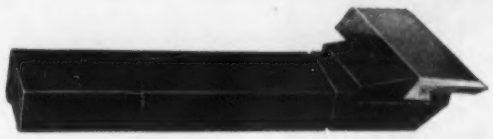
FREE: WRITE FOR BULLETIN

HOSSFELD MFG. CO.
425 W. THIRD STREET, WINONA, MINNESOTA

▲ For more details circle NED-582 K7 on enclosed inquiry slip ▲

Economy, Versatility, Efficiency

FOR CUTTING-OFF, THREADING, FORMING, GROOVING



RAPIDOR TURNING TOOLS

"Razor blade" economy, multi-job versatility, time-saving efficiency . . . these are just a few of the important advantages you get with Rapidor *changeable blade* turning tools. And, chances are, the Rapidor you need . . . whether for cutting-off, threading, forming or grooving . . . is available from standard stock. (Blades for grooving "O" rings and retaining rings are available.) Bokum will also design and build "specials" to your specific requirements. Want more information? Write for literature today.

DEPT. T

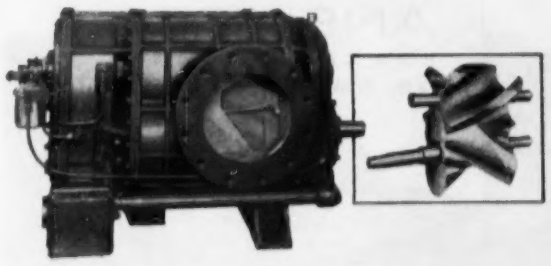
CUTTING-OFF
THREADING
FORMING AND GROOVING

BOKUM TOOL CO. INC. 14775 Wildemere Ave. Detroit 38, Mich.

▲ For more details circle NED-583 K7 on enclosed inquiry slip ▲

I-R AXI-COMPRESSORS

formerly "Standardaire"



ROTORS NEVER TOUCH although they operate with clearances of a few thousandths . . . so there is no wear, no need for internal lubrication. I-R AXI-COMPRESSORS deliver oil-free air. Unique axial-flow design gives you more output per pound of compressor than any other type . . . with less power consumption. Sizes range from 100 cfm to 15,000 cfm, for vacuums to 25-inches, pressures to 15 psi. *Write for Bulletin 11,001.*

Ingersoll-Rand 17-661

11 Broadway, New York 4, N. Y.

Over 1000 types and sizes of I-R compressors . . . 1/4 to 6000 hp.

▲ For more details circle NED-584 K7 on enclosed inquiry slip ▲

Clippard's NEWEST MINIATURE AIDS TO AUTOMATION!

MAC-38D
Double Ram, Double Acting Air Cylinder

MAC-38S
Single Ram, Double Acting Air Cylinder

MAC-38S
Spring Return, Single Acting Air Cylinder

MAN-12
12-Port Manifold

MAV-2 & 3
2 and 3-Way Air Valves

The pioneer manufacturer of miniature pneumatic devices proudly presents a broad new line of small, but mighty, air components. We are sure you will find them most useful in automatic control and work feeding operations and new end products . . . especially where space or weight is a problem!

Included are new ⅜" bore single and double ram double acting cylinders in 1, 2, 3, 4, 5 and 6-inch strokes; improved spring return cylinders; two and three way air valves and many clever new interchangeable fittings and accessories you have asked for. All are precision made and life tested for millions of cycles of trouble-free operation.

Clippard miniature pneumatic devices have established an enviable "in use" reputation with America's most progressive manufacturers, large and small. You will find them equally dependable, sturdy and easily mounted . . . indispensable for speeding production and improving work quality . . . AUTOMATICALLY!

WRITE NOW FOR NEW CATALOG!

Clippard INSTRUMENT LABORATORY, INC.
7354-N Colerain Road, Cincinnati 24, Ohio

Manufacturers of R.F. Coils, Electronic Equipment, Miniature Pneumatic Devices.

▲ For more details circle NED-585 K7 on enclosed inquiry slip ▲

SHOULDERS FORMED
Faster Easier Better
with RELIANCE SNAP RINGS

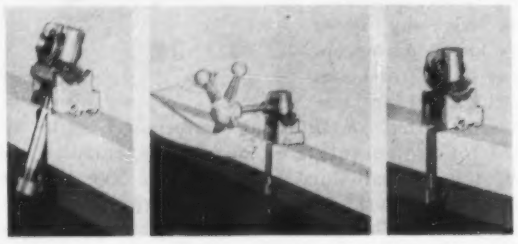
In the case of machining shoulders on shafts or in counterbores, material that goes into "sweepings" can be expensive. Reliance Snap Rings allow you to order shafts and seamless tubing to size. Machining is then limited to only one narrow groove for the snap ring. Time is saved and production costs are reduced. For more complete information write for Engineering Bulletin 4 K/3.

EATON RELIANCE DIVISION
MANUFACTURING COMPANY
509 CHARLES AVE. • MASSILLON, OHIO
SALES OFFICES: NEW YORK • CLEVELAND • DETROIT
CHICAGO • ST. LOUIS • SAN FRANCISCO • MONTREAL

For more details circle NED-587 K7 on enclosed inquiry slip

MECHANICAL PUNCH CLAMPS made in 10 and 15-ton capacities

Punch dies are quickly mounted to slides of old or new, single or double action presses by means of these mechanical punch clamps. Made in 10 and

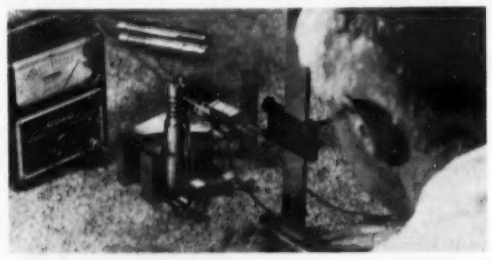


15-ton capacities, clamps can be installed with minimum of machining. A pivot base is mounted to top of slide flange by three screws. A swinging T-bolt, which fits through an open slot in the flange into a pocket on the die, is threaded at the top and keyed to a bevel gear. Mating pinion gear is turned by inserting and rotating a wheel wrench. A spring-loaded locking pawl drops into position as wrench is removed from gear's socket. Made by **Clearing Machine Corp.**, Dept. NED, 6499 W. 65th St., Chicago 38, Ill.

For more details circle NED-589 K7 on enclosed inquiry slip

ELECTRONIC MEASURING SYSTEM affords ranges of 0.004 and 0.002 in. in 0.0001 and 0.00005-in. graduations

Hermetically sealed Electro-Probe gage head and a lightweight, portable, battery-powered transistor amplifier, plus accessories, comprise model 230P-2 pre-



cision electronic measuring system. Device can be used for precision measurement on surface plate or machine, and is suited to general and patrol inspection. Amplitude of continuously produced electronic signal maintains such exact linear relationship to contact movement that available electrical instruments are not sensitive enough to measure the error.

Linear output is available over contact travel of 0.060 in. Head can be used with various types of contacts and contact mountings depending on overall accuracy required, and can be operated with any one of several types of amplifiers. Ranges of 0.004 in. at 0.0001-in. graduations, or 0.002 in. at 0.00005-in. graduations are instantly available by switching. Both gage head and output cord are unaffected by oil and water. Made by **Federal Products Corp.**, 1118NR1 Eddy St., Providence 1, R. I.

For more details circle NED-590 K7 on enclosed inquiry slip

COLUMBIAN HYDRAULIC VISE
speeds up production!
frees operator's hands for essential work

Every plant, machine shop, garage . . . every metal working company can speed production, save time and manpower, reduce costs with Columbian Hydraulic Vises.
AA-2642

For full details, write for Bulletin LL-2029.

COLUMBIAN Vises
The Columbian Vise & Mfg. Co.
Cleveland 4, Ohio
Sledge Tested guaranteed unbreakable

controlled by 2 simple foot pedals!

SOLD EXCLUSIVELY THROUGH DISTRIBUTORS
For more details circle NED-592 K7 on enclosed inquiry slip

does MORE work... MORE easily

new POWER FEED HEAD
U. S. Vertical Miller

Here's the new U. S. Vertical Miller with Power Feed Head—the head into which U. S. has built all the most wanted features without sacrificing traditional U. S. simplicity. Check its infinitely variable feed rate, its 800 pounds of down thrust on the quill, its supplemental hand feeds—it is the milling head that was designed to meet all shop needs.

Add to these the basic advantages of the U. S. Vertical Miller. You can easily see why it's the milling machine that "does more work more easily".

more versatile
Feed infinitely variable from .002" to .008" while in operation
greater capacity
5½" power quill travel; 800 lb. down thrust
more convenient
Supplemental hand feeds
increased rigidity
Enclosed hard chrome plated quill with internal lock

Write for descriptive folder
THE U·S·Burke
MACHINE TOOL DIVISION
2 Brotherton Rd., Cincinnati 27, Ohio

For more details circle NED-593 K7 on enclosed inquiry slip

THE RIGHT ANSWER FOR LARGE PLANTS OR SMALL

Another typical example of how Palletainers conserve floor space in busy produce warehouse.

USP PALLETAINERS

BEARING PLATE
HI LODE
WAREHOUSE
BULK LODE

Why pay a premium for wasted floor space when you can make it do double, triple duty by simply storing, stacking or transporting your products or materials in USP Palletainers.

Palletainers are available in a wide range of sizes, types and styles to meet your needs. Engineered to handle light and fragile products, or heavy unit loads up to 6000 pounds each with perfect safety and full inventory visibility. They'll stack to the rafters and cut your shipping losses, too. And...when empty, they can be folded flat for space saving and lower return freight rates.

No matter what you manufacture—store or transport—in a large plant or small... You need Palletainers!

You can see for yourself how USP Palletainers will quickly pay for themselves in your plant. Ask for your own copy of the big, new Palletainer catalog today. It's profusely illustrated with interesting, money saving applications plus complete specifications and construction details.

UNION STEEL PRODUCTS CO.
ALBION, MICHIGAN

For more details circle NED-588 K7 on enclosed inquiry slip

Balance Rotating Parts
FASTER...EASIER

USE Anderson BALANCING WAYS

No setup, no leveling, no centering. Chilled iron discs, ground and balanced to extreme accuracy, rotate with minimum friction on special bearings. Glass-hard spindles and bearings prevent wear or ball-bearing indentations when balancing heavy weights. Superior accuracy lasts throughout the long life of the balancing ways. Proved and preferred 38 years. For information on sizes, types, and prices of Anderson Ways, write for Bulletin 10-40.

Anderson
Write for Bulletin 10-40
ANDERSON BROS. MFG. CO.
ROCKFORD, ILLINOIS

For more details circle NED-591 K7 on enclosed inquiry slip

Series "G" UNIBILT BELT CONVEYORS

7 Basic units which are easily fastened together in many combinations to produce a *customer-assembled conveyor.*

END DRIVE UNIT
INTERMEDIATE SE
E-UP UNIT
LOADING SECTION
CENTER DRIVE UNIT
VERTICAL CURVE
END UNIT

LENGTHS — up to 100'
SPEEDS — 10 to 80 FPM
WIDTHS — 18", 24" & 30" standard
CONSTRUCTION — 6¼" deep formed steel channel — braced and welded throughout.
Equipment is designed to match corresponding width Live Roll and Gravity Roll Conveyors.

UNIBILT COMPONENTS + SELF-ASSEMBLY = CUSTOM CONVEYORS

Write, Wire or Call
CONVEYOR SPECIALTY COMPANY, Inc.
37 Newport Avenue, North Quincy 71, Mass.

For more details circle NED-594 K7 on enclosed inquiry slip

LUCKY FELLOW... HE'S SOLVED

A PRODUCTION BOTTLENECK!

In any plant, the soldering operation is usually the function that slows down production.

That's why it's just good sense to use the best . . . Kester . . . made by Solder Experts with over 50 years of experience. Kester Flux-Core Solder will do your job in the quickest and best manner.

Free: The Kester 78-page Text Book "Solder . . . Its Fundamentals And Usage"

KESTER SOLDER

Company 4249 Wrightwood Ave. Chicago 39, Ill.
Newark 5, New Jersey
Brantford, Canada

▲ For more details circle NED-595 K7 on enclosed inquiry slip ▲

Specially Designed **COLSON HANDLING EQUIPMENT**

Famous Lift-Jack System

Step up the flow of goods and cut manpower costs with Colson's quality-constructed Lift-Jack System. Actual field tests prove it pays for itself in six months through savings in receiving, shipping and production. Precision engineered for easy steering . . . built for years of long, rugged use. Available in both wood and steel platform skids.

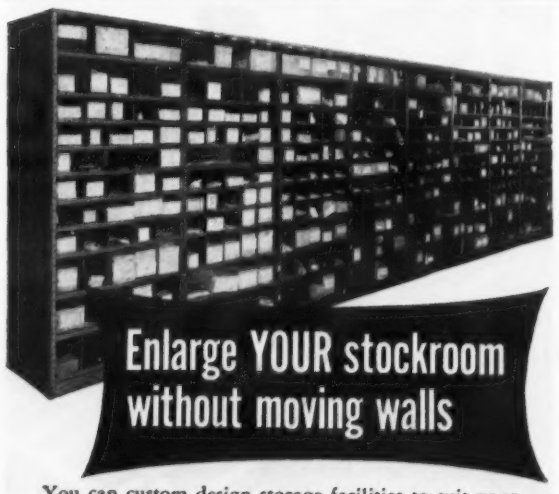
UNIVERSAL DRUM TRUCK
Fastest, safest, most efficient handling of drums and barrels. Locks firmly on any size container. Lifts easily . . . carries with perfect balance.

RUGGED STEEL PLATFORM TRUCK
Reinforced underside for extra heavy loads. Heavy duty casters and rigidly bolted handles add years of extra life.

Colson

The Colson Corporation
General Offices, **Elyria, Ohio**
Factories in Elyria, Boston and Toronto

▲ For more details circle NED-596 K7 on enclosed inquiry slip ▲



Enlarge YOUR stockroom without moving walls

You can custom design storage facilities to suit your exact needs—with Equipto Steel Shelving Units. Eliminate "dead areas" and unnecessary bulk . . . enlarge your stocking area . . . accelerate stock handling.

Available in all sizes, either open or closed . . . dividers, panels, label holders, bin fronts, and drawer sections may be added or rearranged at any time. For further details on shelving and other Equipto products write for free 16 page booklet No. 256, "Short Cuts to Greater Profits."

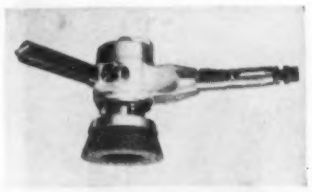
Equipto

690 Prairie Avenue
Aurora, Illinois

STEEL SHELVING . . . PARTS BINS . . . LOCKERS . . . DRAWER UNITS . . . CARTS . . . WORK BENCHES.

▲ For more details circle NED-597 K7 on enclosed inquiry slip ▲

PNEUMATIC GRINDERS
also for sanding and wire brushing



Use of magnesium alloy castings minimizes weight of 1500 series pneumatic hand grinders which have lever type of thumb-tip throttle. A muffler handle reduces noise and serves as an air exhaust. Tools can be used for metal grinding, sanding, and wire brushing. Basic unit is offered in variety of speeds and in several wheel and guard mountings. Made by **Reed Roller Bit Co.,** Cleco Air Tool Div., Dept. 15 NED, 5125 Clinton Drive, Houston 20, Tex.

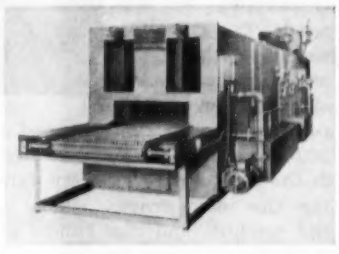
▲ For more details circle NED-598 K7 on enclosed inquiry slip ▲

SUBMINIATURE SWITCH
features stainless steel springs

Double-end plunger of this 25/32 x 7/16 x ½-in. subminiature switch makes possible operation directly from cams. The switch mechanism uses stainless steel spring for long life. Double-break contacts offer a number of circuit connection possibilities with four terminals. Said to have a mechanical life of over 10 million cycles, the vibration and shock resistant switch is rated at 10 amp, 30 v dc, or 115 v ac. Made by **Illinois Tool Works,** Licon Switch Div., 2503 N. Keeler Ave., Chicago 39, Ill.

▲ For more details circle NED-599 K7 on enclosed inquiry slip ▲

PARTS WASHING MACHINE
serviced by overhead, belt conveyers



Two overhead conveyers and a flat wire mesh belt conveyer pass through the Triple Tunnel washing machine which incorporates an automatically timed wash-rinse-dry cycle. Parts are placed on the appropriate overhead conveyer according to subsequent operations to be performed on them. For example, while one conveyer is carrying parts to subassembly from the washer, the other trolley conveyer is taking parts through painting and drying operations. Belt conveyer handles parts which cannot be effectively cleaned and dried when suspended, as well as parts routed to other destinations. Three conveyers may be operated simultaneously or individually. Made by **Alvey-Ferguson Co.,** Dept. NE, 1965 Disney St., Cincinnati 9, Ohio.

▲ For more details circle NED-600 K7 on enclosed inquiry slip ▲

NEW
HYDRAULIC POWER BENDER

bends 4-inch conduit 90° in one fast ram stroke!

One man wheels the GREENLEE 884 from job to job, sets up, and operates fast and easy

The new lightweight GREENLEE 884 Power Bender bends up to 4-inch conduit and pipe 90° in only 4 minutes! Universal pipe supports handle 10 sizes, from ½-inch . . . facilitate easy insertion and removal of pipe or conduit from front of bender. Rugged aluminum alloy and steel construction cuts weight drastically, yet easily sustains 40 tons of pressure developed by ram. Numerous advanced features speed one-man transport, setup, and operation. Send for new illustrated Bulletin E-224.

GREENLEE TOOL CO.
1950 Herbert Ave., Rockford, Illinois

GREENLEE

▲ For more details circle NED-601 K7 on enclosed inquiry slip ▲

LUBRIVAL

—a new, different, better CIRCULATING OIL SYSTEM

Bulletin 70 tells how it works, where to use it

LubriVal is specifically designed for safe, sure, foolproof circulating lubrication of presses and automatic and semi-automatic machines.

LubriVal is a Farval system, employing the Dualine principle of pumping oil under pressure to measuring valves which deliver it to bearings. Lubricant is fed by positive piston displacement.

LubriVal Progressive Dualine Valves, manifolded in any number required, have individual sight indicators, with pressure sensing mechanism which warns of clogged or broken lines in *any part* of the system —a feature entirely new to circulating oil systems.

FARVAL
CENTRALIZED SYSTEMS OF LUBRICATION

Bring your file up to date with Bulletin 70

The Farval Corporation
3283 E. 80th St. Cleveland 4, Ohio
Sales Representatives in all major industrial market centers

▲ For more details circle NED-602 K7 on enclosed inquiry slip ▲

New B&D Magnetic Drill Press

Takes the tough jobs standing on its head!

Here's a tool that's got to be seen to be believed! Mail the coupon today for a free demonstration. Drilling deckplates or bulkheads . . . large jigs or dies . . . steel beams or channels . . . large plates—wherever a drill press must work upside down, on its side or in tight spots, you'll want a Black & Decker Magnetic Drill Press.

Ideal for shipbuilding, tool shops, structural steel fabricators, sheet metal work, welding shops or heavy machinery work. See it right away. Mail coupon for a free demonstration of the tool *loaded* with features you want to: THE BLACK & DECKER MFG. Co., Dept. 1910, Towson 4, Md. (In Canada: P. O. Box 278, Brockville, Ontario.)

Look Under "Tools—Electric" in Yellow Pages

Leading Distributors Everywhere Sell

B&D Black & Decker®

Quality Electric Tools . . . Power-Built for Powerful Performance

MAIL TODAY FOR FREE DEMONSTRATION

THE BLACK & DECKER MFG. CO., Dept. 1910, Towson 4, Md.

☐ Please arrange a demonstration of your new Magnetic Drill Press.

☐ Send additional information.

Name.....Title.....
Company.....
Address.....
City.....Zone.....State.....

▲ For more details circle NED-603 K7 on enclosed inquiry slip ▲

How To Get Things Done

BOARDMASTER VISUAL CONTROL

Gives you a Graphic Picture of your operations, spotlighted in color. You See what is happening at a glance. Facts at eye level—saves you time, prevents errors.

Simple, flexible—easily adapted to your needs. Easy to operate. Type or write on interchangeable cards, snap in grooves. Ideal for production, scheduling, sales, traffic, inventory, etc. Made of metal. Compact, attractive.

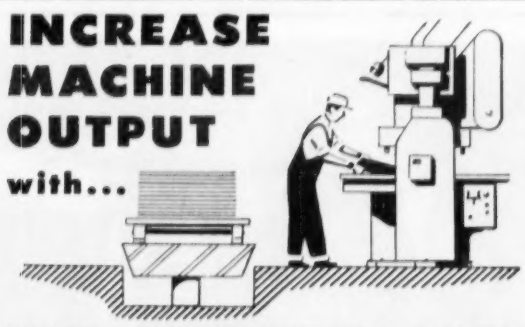
Complete Price $49.50 Including Cards

FREE 24-Page Illustrated Booklet N-300 Mailed Without Obligation

GRAPHIC SYSTEMS 55 WEST 42ND STREET NEW YORK 36, N. Y.

For more details circle NED-604 K7 on enclosed inquiry slip

INCREASE MACHINE OUTPUT with...



GLOBE PRODUCTION LIFTS

Heavy lifting is eliminated, work is speeded, when raw material is kept at feeding level by a Globe lift. Loaded skids or pallets, deposited on floor-flush platform, are lifted by smooth push-button control to convenient level. As material is used from top of pile, lift is "inched" upward to maintain proper height.

Globe methods provide countless opportunities for saving by hydraulic lifting of materials to feed-in positions, heavy equipment to test racks, and removal of processed work.

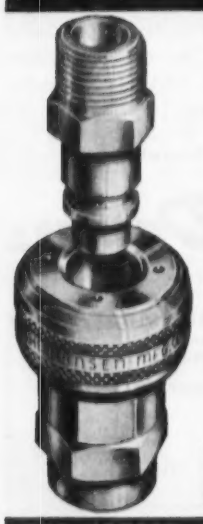
For complete information write for "MODERN LIFTING" (Form 663). Globe Hoist Company, East Mermaid Lane at Queen Street, Philadelphia 18, Pa.

GLOBE PRODUCTION LIFTS
PLANTS: DES MOINES — PHILADELPHIA

HYDRAULIC AND MECHANICAL LIFTS for every industrial need

For more details circle NED-605 K7 on enclosed inquiry slip

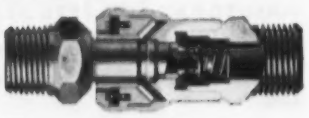
HANSEN QUICK-CONNECTIVE PUSH-TITE COUPLING



Provides Instant Automatic Flow or Shut-Off

To connect a Hansen Push-Tite Coupling, you merely push the Plug into the Socket with one hand. Flow is instantaneous.

To disconnect, push back sleeve on Socket . . . Coupling disconnects and flow is shut off instantly and automatically. No tools required. When Coupling is connected, Plug is free-swiveling, thus eliminating any possibility of kinks in hose.



Two-way shut-off and straight-through Couplings also available.
WRITE FOR CATALOG

THE HANSEN MANUFACTURING COMPANY
4931 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle NED-606 K7 on enclosed inquiry slip

SHOP VACUUM CLEANER has 2½-in. diameter hose, handle

The 2½-in. diameter hose, handle, and nozzle enable the Shop-Vac vacuum cleaner to handle difficult shop cleaning problems. Hose system will not clog on average debris or shop dirt. The portable unit is furnished with 28-gal fiber drum and can also be used with any standard 24-gal metal disposal can. By switching the hose, unit can be used for exhausting, blowing, drying and spraying. Air regulator controls amount of vacuum and exhaust. Cleaner is powered by ⅞-hp ball-bearing motor. Dust hoods are available that can be attached directly to woodworking or other types of machinery that create dust or dirt. Unit can also be used with standard 1¼-in. diameter vacuum fittings. Made by **Craftools, Inc.**, Dept. NED, 396 Broadway, New York 13, N. Y.

For more details circle NED-607 K7 on enclosed inquiry slip

COMPRESSION MOLDING MACHINE develops 20,000-psi ram pressure

Airdraulic principle permits operation of this Automite A-10 compression molding machine on 80 to 100-psi plant air supply. Machine is designed for short run production and is practical for lab and experimental work. With 80 psi working directly on oil, ram moves into position on low pressure and booster steps it up to 20,000 psi ram pressure at any desired location within the 6-in. stroke. Safety valve prevents overstressing the mold frame, which is an integral part of the machine and can handle a 5 x 6-in. chase plate. Only four screws are removed to replace core and cavity. All machine parts are accessible for service. Made by **Automatic Molding Machine Co.**, 3217-NE Exposition Place, Los Angeles 18, Calif.

For more details circle NED-608 K7 on enclosed inquiry slip

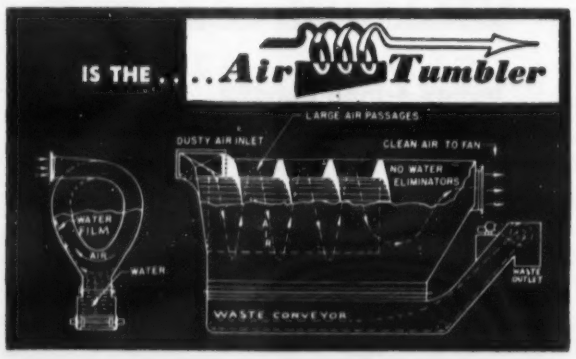
Overhead Cranes

Borg-Warner Corp., Industrial Crane & Hoist Div.—Construction features, available designs, and typical installation of Industrial heavy double-girder overhead cranes are contained in illustrated bulletin HD-1000. Sizes are made for practically all load conditions.

For more details circle NED-609 K7 on enclosed inquiry slip

The MASTER of DUST in INDUSTRY

IS THE . . . . Air Tumbler



HIGH EFFICIENCY WITH LOW WATER EVAPORATION

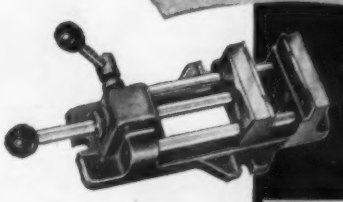
Write For Bulletin No. 551

DUST SUPPRESSION & ENGINEERING CO.
P. O. BOX 67 • LAKE ORION, MICHIGAN

For more details circle NED-610 K7 on enclosed inquiry slip

THE FIRST WIDE RANGE DRILL PRESS VISE

that safely handles both rigid and non-rigid work without distortion.



THE LW

ADJUSTO/QUICK CONTROL 4" DRILL PRESS VISE AND FIXTURE HOLDER $31.50

A precision built device designed to cut tooling costs and increase production.

Heavy 4" wide removable jaw inserts allow simple, quick adaptation for low cost jigs and fixtures. 5½" opening. Easy hand pressure on hardened and micro-ground bar locks and holds the work fast.

Send for complete catalog giving prices and specifications on these quality, low-cost L-W Products

L-W CHUCK COMPANY 51 SO. ST. CLAIR ST. TOLEDO 4, OHIO

For more details circle NED-611 K7 on enclosed inquiry slip

BUILD INFRA-RED OVENS

As Easy as Erector Set Assembly

with driQuik

OVENS ANY SIZE OR SHAPE

INTERLOCKING SECTIONS

These pre-engineered sections are completely wired, with easy-to-assemble structural parts for permanent or mobile ovens. Or, if you prefer, we will build ovens to your specifications.

LOW INITIAL COST either way and maintenance costs are practically zero because these units have ceramic type generators and there are no bulbs or sockets to burn out. DARK BURNING—NO high intensity light injurious to eyes. Write today for literature giving complete data.

driQuik DIVISION DRY CLIME LAMP CORP. GREENSBURG, INDIANA

For more details circle NED-612 K7 on enclosed inquiry slip

Gary WELDED GRATING and TREADS

- TAILOR MADE—for most economical installation.
- RIGID STRENGTH—sturdy resistance-welded construction.
- LIGHT WEIGHT—for greater load bearing capacity.
- SELF-CLEANING—for reduced maintenance costs.
- OPEN CONSTRUCTION—gives maximum ventilation and illumination.

Get all the facts. Write for Bulletin N-107

ROCKWELL SPRING & AXLE CO.
GARY GRATING DIVISION
4017 EAST SEVENTH AVE., GARY, INDIANA

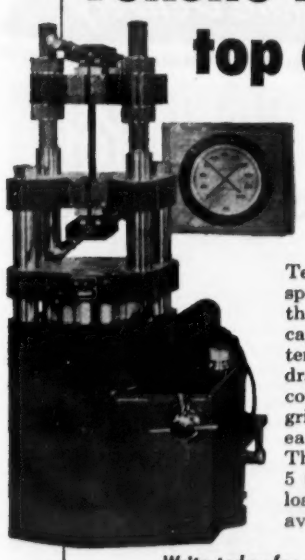
For more details circle NED-613 K7 on enclosed inquiry slip

Burny Bros. garage and stockroom floors get daily scrubbing with a *Job-Fitted Combination Scrubber-Vac* and *Setol Cleanser. They're an unbeatable team* to speed the cleaning of oily, greasy floors. *Here's why:* A *Scrubber-Vac* applies the cleanser, scrubs, flushes, and picks up (damp-dries the floor)—*all in one operation! Job-fitted* to specific needs, the machine provides maximum brush coverage. Its teammate, *Setol Cleanser,* emulsifies grimy oil and grease *instantaneously* for fast, thorough removal by the machine's powerful vac. The *Scrubber-Vac* shown above, *Finnell's 213P,* cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon floor condition and congestion. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 5510 East St., Elkhart, Ind.

FINNELL SYSTEM, INC. *Originators of Power Scrubbing and Polishing Machines* FINNELL BRANCHES IN ALL PRINCIPAL CITIES

For more details circle NED-614 K7 on enclosed inquiry slip

Tensile test with top accuracy



Use this simple hydraulically powered fast-acting tester

Test the tensile strength of spotwelds, strip, wire, anything within its 20,000 lb. capacity. The Model ST-1 tensile tester has a hydraulically powered, easily controlled ram. Self-acting grips are open-sided for easy specimen insertion. They will accept specimens 5 to 9" in length. Various load gauges and grips are available.

Write today for more information

DETROIT TESTING MACHINE COMPANY

9394 Grinnell Avenue, Detroit 13, Michigan

For more details circle NED-615 K7 on enclosed inquiry slip

Extra Powerful 3/8" Drill-

just $39.95

New Porter-Cable Drill Features:
Big Drill Performance—
Big Chuck Capacity!

Never before a drill with so much power and capacity at this low price!

The new Model 149 is specially designed to do drilling jobs not possible with standard 1/4" drills. It features a heavy-duty Universal motor, extra large precision ground gear chuck, mansized pistol grip, ball bearings and much more. See and try the new Model 149 drill at your dealer's soon. Write for full information.

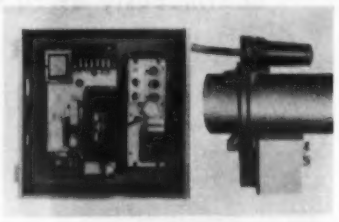
PORTER-CABLE Machine Company
7120 N. Salina Street
Syracuse 8, New York

Porter-Cable *Quality Power Tools*

saws • drills • sanders • routers • shapers • planes
In Canada: Porter-Cable Ltd., Box 5019, London, Ont. Canadian prices slightly higher.

For more details circle NED-616 K7 on enclosed inquiry slip

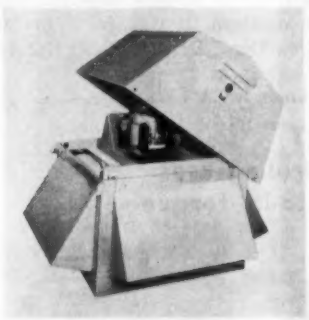
DENSITY & GRAVITY CONTROL
for material flowing through a pipe



Process material conditions can be recorded or controlled up to 2000 ft from the point of measurement by the JSP - 173A density and gravity control. It does not come in contact with the materials, is easily installed, and can be removed for use in another location when desired. When used with a satisfactory controller, it provides accurate control of density or gravity within close limits. Changes in gravity, interface level of different materials, and solids content in liquids from 1 to 25 per cent are indicated when device is used with a recorder. Made by **Instruments, Inc.,** Box 556-NE, Tulsa, Okla.

For more details circle NED-617 K7 on enclosed inquiry slip

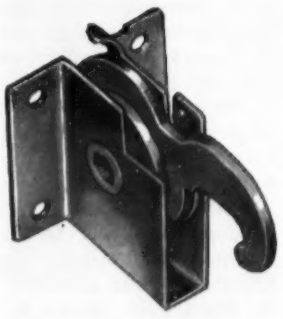
ROOF VENTILATOR
has direct-drive centrifugal fan



Quiet operating and easy to install, this direct - drive centrifugal roof ventilator is available in 1/10 to 10-hp sizes with air exhausting capacities from 1100 to 25,000 cfm. A wide variety of motors can be supplied, including totally enclosed and explosionproof, for operation on most standard electric power. Backward curve wheels are dynamically balanced, and spun venturi assures quiet, efficient operation. They are weathertight and have bird screen. Tilt-back hoods facilitate maintenance. Made by **Peerless Electric Co.,** Fan & Blower Div., 1401 W. Market St., Warren, Ohio.

For more details circle NED-618 K7 on enclosed inquiry slip

LATCH
joins prefabricated sections



Eccentric cam of the No. 1156 latching device for prefabricated sections draws in the companion section to form a secure joint. The latch is operated by an Allen wrench, requiring a single turn for activation. Made by **Kason Hardware Corp.,** 131 Wallabout St., Brooklyn 7, N. Y.

For more details circle NED-619 K7 on enclosed inquiry slip

Your one source is **NATIONAL** for **STANDARD** or **SPECIAL FASTENERS**

Regardless of your fastener requirement National can save you time and trouble. *Write* for National's Special Products booklet, or for information on the fastening specialty that interests you.

THE NATIONAL SCREW & MFG. CO. • CLEVELAND 4, OHIO
Pacific Coast: National Screw & Mfg. Co. of California
3423 South Garfield Ave., Los Angeles 22, California

National PRODUCTS

For more details circle NED-620 K7 on enclosed inquiry slip

TAYLOR

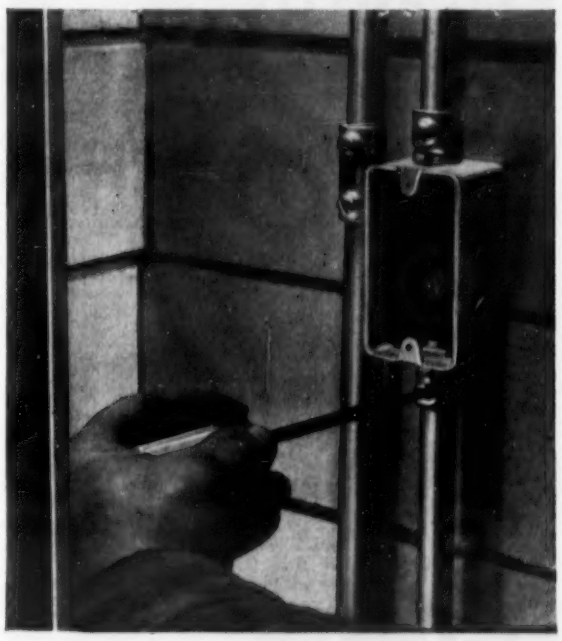
BI-THERM* DIAL THERMOMETER

Easy Reading: A quick, reliable temperature indicator, ideal for applications where an easy-reading, low cost, direct connection thermometer is desired. Accurate to ±1% of scale, because it is unaffected by ambient temperatures. Silicone-damped to prevent pointer chatter and improve speed of response. All-welded stainless steel construction with hermetically sealed bezel. 3" or 5" dials; 4", 6", 9" and 12" stems. Separable wells, 3/4" and 1". Range limits minus 40° to plus 750°F. Ask your Taylor Field Engineer, or write for **Bulletin 98267.** Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada.

*Trade-Mark

Taylor Instruments!
MEAN ACCURACY FIRST

For more details circle NED-621 K7 on enclosed inquiry slip

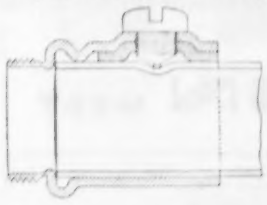


A SCREWDRIVER
is all you need to install
National Electric E. M. T. Fittings

Even in corners and other close locations, a screwdriver is your only tool for making connections with National Electric E.M.T. fittings. Simply slip the fitting over the end of the conduit and tighten the patented embedding screw. That's all there is to it.

You'll find National Electric connectors and couplings are safe and strong. The body is one sturdy piece of pressed steel, electrogalvanized for full protection against corrosion. The precision screw and boss make a uniform installation possible throughout the job. Inspection is easy and the contact of the screw constitutes a safe permanent ground.

National Electric E.M.T. fittings are the easy way to assure the quality of your connections. Try them . . . they're sold by the leading electrical distributors.



The outstanding holding action of National Electric Fittings is obtained when the tip of the screw is driven home and becomes embedded in the tubing wall. Actual tests prove the connection is a vibration proof bond that won't break or loosen unless the screw is purposely released.

Patent No. 2,455,180

National Electric Products
PITTSBURGH, PA.
Plants • 12 Warehouses • 41 Sales Offices

For more details circle NED-622 K7 on enclosed inquiry slip

cooler cutting gives longer disc life

Gardner Abrasive Discs lower your grinding costs

Send for latest general catalog

GARDNER abrasive discs

GARDNER MACHINE COMPANY
462 Gardner St.
Beloit, Wisconsin

For more details circle NED-623 K7 on enclosed inquiry slip

NEW CLARKE

WET-DRY VACUUM CLEANERS

- clean everything from floor to ceiling
- do the job quickly, easily, efficiently
- and slash maintenance costs!

DIFFERENT SIZES TO FIT EVERYONE'S NEEDS

WRITE FOR FREE BROCHURE showing the complete line and the many new efficiency features

See Clarke Maintenance Machines at Booth No. 406 - SANITATION MAINTENANCE SHOW AND CONFERENCE Navy Pier—Chicago October 14-16

Clarke

SANDING MACHINE COMPANY
2210 Clay Ave., Muskegon, Mich.

Authorized Sales Representatives and Service Branches in Principal Cities
Distributed in Canada: G. H. Wood & Co., Ltd., P.O. Box 34, Toronto 14, Ont.

For more details circle NED-624 K7 on enclosed inquiry slip

HOW to convey bottles...jars... cans...packages

Send today for the new bulletin on Rex TableTop Conveyor Chains—28 pages of product information, application photographs, engineering data and recommendations for efficient conveyor design. Rex TableTop is the standard of the industry, and here's the story on how to use it. The bulletin is yours for the asking. Mail the coupon.

CHAIN BELT

CHAIN Belt Company
4686 West Greenfield Ave., Milwaukee 1, Wis.
Please send Bulletin 56-60 on Rex TableTop.
Name.....
Company.....
Address.....
City.....State.....

For more details circle NED-625 K7 on enclosed inquiry slip

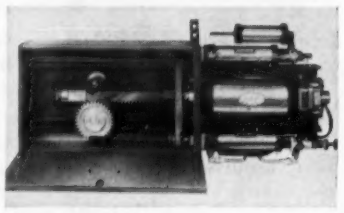
REPRODUCTION MACHINE copies original documents continuously at 20 fpm

Fast, economical way to copy original documents is provided by this model 2 variation of the XeroX Copyflo continuous printer. Machine provides dry, positive prints up to 11 in. wide at a rate of 20 fpm from one or a series of original documents. Reproduction is by the continuous and automatic zerography process.

Unit features an opaque-head lens arrangement that reduces up to 24-in. wide documents to 11-in. wide. Smaller items can be enlarged up to 200 per cent. Document is fed into throat of continuous belt table that carries it through camera-exposure stage and deposits it back at operator's fingertips. For repeat copies, original can be immediately refed into the machine. All Copyflo models can process continuous paper offset masters in roll form at 20 fpm. Made by **Haloid Co.**, Dept. PX-266, 2-20 Haloid St., Rochester 3, N. Y.

For more details circle NED-626 K7 on enclosed inquiry slip

POWER FEED UNIT for multiple drilling uses delivers 3000 lb-in. torque

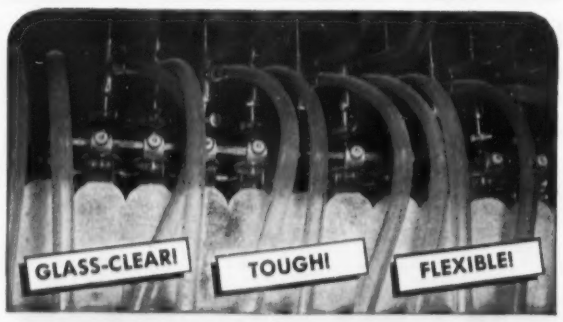


This Hy-Torque heavy-duty feed unit is designed to power the feed on multiple drilling applications. Steel gear rack drives pinion gear mounted on shaft with a hub as the drive unit. Torque of 3000 lb-in. delivered at hub can be applied to any cross-feed shaft or driven shaft for rotational or linear movement. Four models afford a choice of 170, 255, 340, or 425 degrees of pinion gear rotation.

A $4\frac{1}{2}$-in. bore air motor advances the gear rack with thrust of 15 times applied air line pressure. Two Hydro-Checks govern the feed rate and balance the hydraulic reaction during feed. They can control feed through entire stroke, or can be set to rapid-traverse, then slow the speed at any point, such as at break-through of drill. Skip and stop checking action is optional in either electrical or pneumatic controls.

Units will operate on 15 to 150 psi air pressure, and are available for either line or transformer-dropped low voltage operation. They are easily mounted in any position. Made by **Bellows Co.**, 230 W. Market St., Akron 9, Ohio.

For more details circle NED-627 K7 on enclosed inquiry slip



TYGON *flexible plastic* TUBING

Tygon Tubings are produced in many formulations to withstand a wide range of service conditions. Some formulations are tasteless, odorless and non-contaminating—can handle high purity solutions such as liquid foods and drugs in complete safety. Others successfully handle corrosive liquids or gases and are resistant to acids, alkalis, oils, water and alcohol. All are physically tough to withstand rough usage.

Tygon Tubings are extremely flexible. They adapt to any layout — can be installed in minutes. Glass-like clarity permits visual inspection of flow. The polished bore facilitates fast, thorough cleaning. Fifty-five sizes from 1/16" to 3" i. d. provide a size for virtually every tubing need.

367-E

Write today for Bulletin T-97 for complete technical data.

Plastics & Synthetics Division
U. S. STONEWARE
AKRON 9, OHIO

For more details circle NED-628 K7 on enclosed inquiry slip

HENRY AUTOMATIC...

3 IN 1 SELF-CLEANING LIQUID FILTERS

FLOTATION · PROGRESSIVE FILTERING · SETTLING

Henry Automatic liquid filters for industry combine all three basic principals of liquid clarification. They are exclusively designed to eliminate maintenance problems normally associated with filtering equipment. Heavy duty construction assures efficient, long lasting, uninterrupted operation.

Henry Automatic self-cleaning filters for clarifying liquids are available in models with capacities from 10 to 1,000 G.P.M. Write today for complete information—and an answer to your filtering problems.

High potential territories open to responsible manufacturers agents.

HENRY MANUFACTURING COMPANY, INC.
P. O. Box 219 Bowling Green, Ohio

For more details circle NED-629 K7 on enclosed inquiry slip

Let us take over your inventory problem!

Immediate Delivery!

ANY BORE SIZE • ANY MOUNT • ANY STROKE

CARTER CYLINDERS

Here's real help for engineers and designers who need fast action on cylinders. Carter's exclusive key type locking design and simplicity of parts *makes it possible to ship cylinder orders in 24 hours or less!* Now you can have rugged, dependable, compact quality cylinders when you want them. Your order is in process *minutes after we get it.* Get in touch with us *today* for cylinders you need tomorrow.

Catalog File!
Air Cylinders; 750 Lb. Hydraulic; 1500 Lb. Hydraulic; Clamp Cylinders; Air Valves; Built-in Valve Type Cylinders. Complete with parts data, specifications and prices. Send today!

24 HOUR PHONE SERVICE—If you need fast service call your Carter representative or the plant. LANSING, ILLINOIS, GRanite 4-3305 or CHICAGO, BAyport 1-7186. Teletype LNSG, ILL 1119X.

CARTER CONTROLS INCORPORATED
2876 Bernice Road, Lansing, Illinois (Chicago Suburb)
AIR CYLINDERS • HYDRAULIC CYLINDERS
AIR VALVES • ROTARY ACTUATORS • SPECIAL CONTROLS

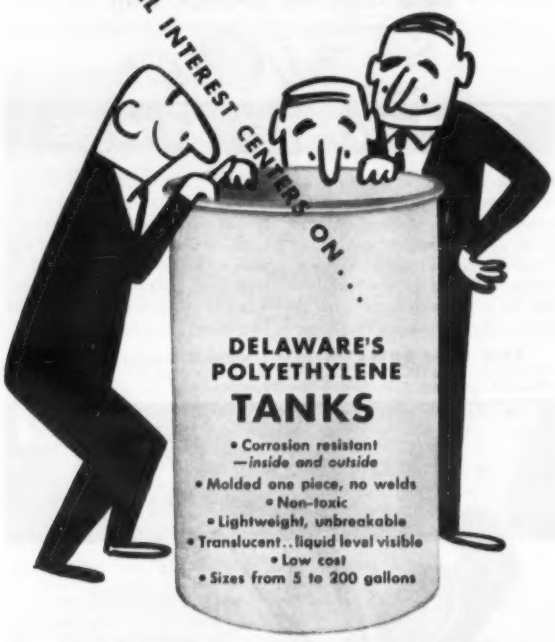
For more details circle NED-630 K7 on enclosed inquiry slip

Let me give you this NEW fact-packed forging guide

If you buy or specify forgings, write for this fact-packed AmForge book. Its 16 pages show how your company can benefit from better AmForge research, engineering and control. You'll see that all this adds up to the kind of "service" you need for production quality and economy. Either circle the number on the magazine service card or write AmForge, Dept. NED 10157 N. Wacker Dr., Chicago 9, Illinois.

AMFORGE DIVISION
American Brake Shoe Company

For more details circle NED-631 K7 on enclosed inquiry slip



DELAWARE BARREL AND DRUM COMPANY
WILMINGTON 99, DELAWARE
In Canada: John Wood Company Limited — Toronto • Montreal • Winnipeg • Vancouver

▲ For more details circle NED-632 K7 on enclosed inquiry slip ▲

Speedline® FITTINGS CUT PROCESS PIPING COSTS

"Easiest, most economical means to assemble leak-proof, stainless steel process lines," says D. B. Smith, chief engineer at Chapman Chemical Company.

Design features of Speedline fittings, by allowing for on-the-job selection of joining method, cut labor time and costs to a minimum. Leakage problems common to conventional screwed fittings were also eliminated on stainless lines used in the manufacture of ester resins. Speedline fittings and light wall pipe offered other important advantages throughout the installation.

- Provided positive corrosion *and* heat resistance to handle low concentration of sulphuric acid . . . other solutions at temperatures up to 500° F!
- Allowed for easy modification of existing lines to meet future process piping requirements.

Only Speedline corrosion-resistant fittings, designed especially for use with economical, light wall Schedules 5 and 10 stainless pipe, provide these time and cost-saving advantages.

Write today for a copy of Speedline Catalog . . . or contact the Speedline distributor nearest you.

Speedline®

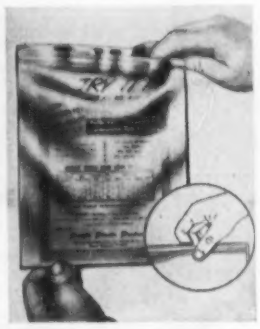
SPEEDLINE IS A REG. T. M. OF HORACE T. POTTS COMPANY 705R

STAINLESS STEEL FITTINGS
THE NEWEST THING IN PIPELINE ECONOMY
SPEEDLINE DISTRIBUTORS ARE LOCATED IN PRINCIPAL CITIES FROM COAST TO COAST

Manufactured by HORACE T. POTTS COMPANY
532 E. Erie Avenue • Philadelphia 34, Penna.

▲ For more details circle NED-633 K7 on enclosed inquiry slip ▲

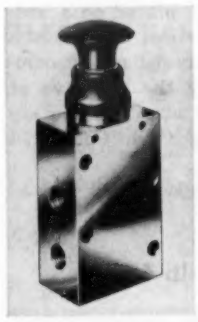
SHOP ENVELOPES
are transparent, have plastic zipper



Delicate and tarnishable parts and tools, work orders, forms, and records can be protected in vinyl plastic transparent shop envelopes. Offered in various sizes, they are air and watertight, dust and leakproof. The Flextite plastic zipper opening can be on long or short side. Sample is offered free. Made by **Pacific Plastic Products,** 407 E. Washington Blvd., Los Angeles 15, Calif.

▲ For more details circle NED-634 K7 on enclosed inquiry slip ▲

PILOT VALVES
rubber boot seals valve stem



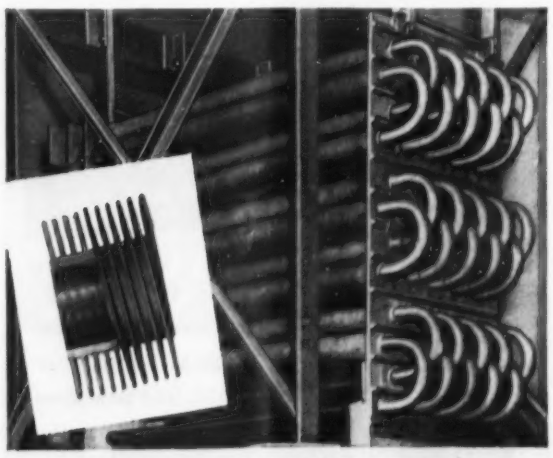
Basic improvement embodied in Flo-Pilot pilot valves is a small synthetic rubber boot snapped in place around valve stem to seal critical parts from dirt and abrasives. They remain leak-free after millions of cycles. Aluminum, stainless steel, and molded nylon contribute to the long service life. Optional actuating heads include palm button, ball cam, lever, locking lever, and mechanical link clevis types, all of which are interchangeable in 30 seconds. Valves can be base, panel, or wall mounted, and can be used for two-way or three-way operation, normally open, or normally closed to inlet pressure. They are rated 150 psi and have ¼-in. ports. Made by **Hanna Engineering Works,** 1759 N. Elston Ave., Chicago 22, Ill.

▲ For more details circle NED-635 K7 on enclosed inquiry slip ▲

TRUCK WINCH
portable unit is battery powered

Pulling capacity of 1000 lb is reported for this portable truck winch which is powered by the truck storage battery without electrical system modification. Adaptable for many uses, it is operated by one man at a rate of 5 fpm. Weight is 106 lb. Made by **Burtchaell Heating Co.,** Hoist Div., 2945 S. E. Powell Blvd., Portland 12, Oreg.

▲ For more details circle NED-636 K7 on enclosed inquiry slip ▲



General Plate Stainless Clad Copper
Enables Griscom-Russell K-Fins
To Meet 2600°F Operating Conditions

Two metals are often better than one, and here's a case in point . . . in Griscom-Russell's K-Fin tubing for high temperature gas to liquid heat exchangers, General Plate Stainless Clad Copper reduces fin tip temperatures 29% (2090°F to 1475°F) with nearly twice the heat transfer rate of unclad stainless.

Benefits? Fin tip temperatures in G. R. K-Fin run well below the oxidation point — fin life is greatly extended — heat exchanger performance is improved substantially — with worth while economies in design.

G. P. Stainless Clad Copper is available in widths up to 13" and thicknesses up to 1/16", single or double clad, in long lengths. It can be blanked, drawn, spun, formed, brazed, and spot or seam welded.

Let us send complete information on G. P. Stainless Clad Copper — it may be just what you have been looking for. Write today for Catalog Sheet 727C.

You can profit by using General Plate Clad Metals.

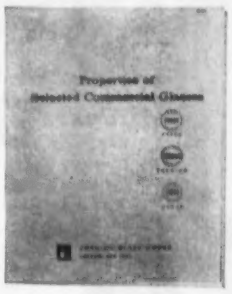
METALS & CONTROLS CORPORATION
General Plate Division 34 Forest Street, Attleboro, Mass.

▲ For more details circle NED-637 K7 on enclosed inquiry slip ▲

How to find out where glass can help you

Glass can take many forms that can help you. There are 65,000 different combinations of useful properties that can be formulated to your own specifications here at Corning.

Glass can be transparent or opaque, a conductor or a nonconductor of electricity, it is immune to corrosion, can be made immune to heat and cold, can stand as a barrier to atomic radiation. It can be many things to many people.



This 12-page Bulletin, "Properties of Selected Commercial Glasses," describes in detail a few of the Corning high-production glasses. It discusses their mechanical properties, resistance to thermal stresses, heat transmission characteristics, electrical properties, corrosion resistance, the basic information you need to determine your need for glass in your products or processes.

Send for Bulletin B-83. Write Technical Products Division.

CORNING GLASS WORKS
56-10 Crystal Street, Corning, N.Y.
Corning means research in Glass

▲ For more details circle NED-638 K7 on enclosed inquiry slip ▲

Proved way to cut assembly costs
P-K® hardened
Self-Tapping Screws

- Eliminate tapping, soldering, riveting, bolting
- Stay tight under vibration
- dependable, uniform quality

Save time and money in fastening metals—plastics—laminates

Type Z Slotted or Phillips

IF IT'S P-K IT'S O.K.

PARKER-KALON
THE ORIGINAL SELF-TAPPING SCREWS
Parker-Kalon Division • General American Transportation Corporation • Clifton, New Jersey

▲ For more details circle NED-639 K7 on enclosed inquiry slip ▲

From Start to FINISH
Penco Lockers
are Perma-Built

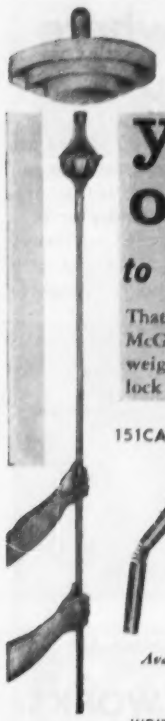
Electrostatic mist spraying by a special Ransburg unit gives every Penco product a smooth, beautiful and durable enamel finish worthy of your office, plant, school or institution. Write for Catalog NE-57-1.

penco "Perma-Built" STEEL LOCKERS
penco STEEL SHELVING
penco STEEL CABINETS

penco
STEEL LOCKERS
CABINETS · SHELVING

penco METAL PRODUCTS DIVISION
ALAN WOOD STEEL COMPANY
OAKS, PA.

▲ For more details circle NED-640 K7 on enclosed inquiry slip ▲



keep your feet on the floor

to change bulbs in safety

That's exactly how you change bulbs with McGills Adaptable Lamp Changer, for a light weight insulated steel pole in 5' sections that lock securely in place enables you to change bulbs easily up to .20' above the floor. There are 9 different heads available to handle your present bulbs. Why not eliminate the danger of unsafe ladders and save maintenance time and money? You can with a McGill Lamp Changer.

Available from Electrical Wholesalers

WRITE TODAY FOR CATALOG No. 84

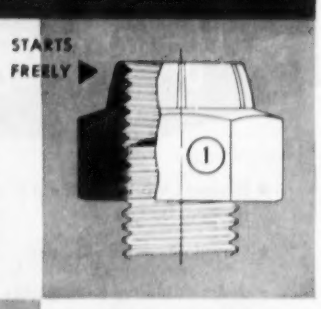
YOU CAN DEPEND ON McGILL QUALITY

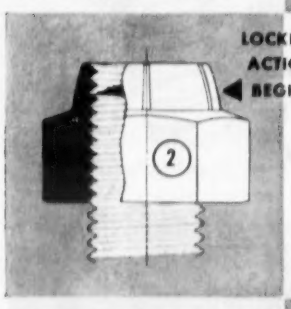
McGILL MANUFACTURING CO., INC. 151 N. Campbell St. Valparaiso, Indiana

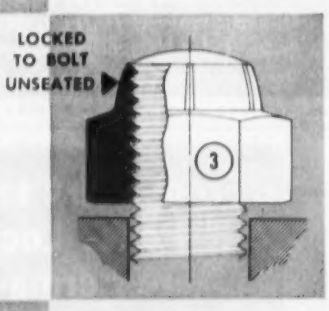
▲ For more details circle NED-641 K7 on enclosed inquiry slip ▲

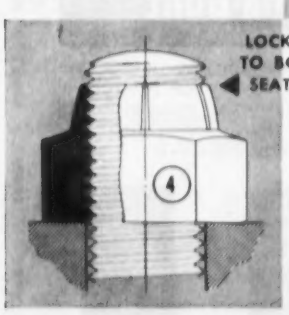
HUGLOCK self-locking nuts with prevailing torque.....

"HUGLOCK" is a one-piece prevailing torque type, re-usable, self-locking nut. The tapered top portion of the nut is slotted to form six threaded segments. These are curved radially inwards to press against the bolt. This creates a heavy inward and downward pressure, producing a friction lock, between the load carrying flanks of the nut and the bolt threads. The combined metal to metal hugging and locking friction is distributed over all of the threads, enabling "HUGLOCK" to grip the bolt firmly, until removed by a wrench . . . The one-piece all metal construction and the continuous thread, extending through the length of the nut, provide maximum thread shear strength. The "HUGLOCK" principle can be incorporated into nuts of standard size, with standard threads or special sizes with special threads . . . "HUGLOCK" maintains its locking action, through repeated removals or re-use on the same bolt or a similar bolt of commercial thread tolerance. It locks to the bolt, whether the nut is seated or unseated. "HUGLOCK" eliminates axial thread play which tends to make a nut creep from its seat and work loose, under severe vibration or shock . . . All lock washers, cotter pins, key plates and other locking devices can be eliminated . . . The "HUGLOCK" section of our catalog contains 24 pages. It includes complete information, specifications, engineering data, prices; will be furnished on request.









NATIONAL MACHINE PRODUCTS COMPANY

*Manufacturer of Standard and Special *12 Pointer and Hexagon Nuts . . . "Huglock" and "Marsden" locknuts,*

44231 Utica Rd., UTICA, Michigan

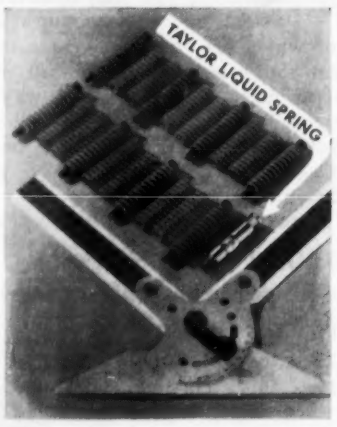
▲ For more details circle NED-642 K7 on enclosed inquiry slip ▲

GASKET SPOTTING MACHINE
uses instant bonding adhesive

Gasket spotting machine which uses Armstrong T-922 hot melt adhesive eliminates problem of gaskets slipping out of place or falling off before completion of the assembly in which they are used. Machine is applicable wherever gaskets are applied in assembly line operations. It is manually operated, but adaptable to automatic use. A tank for heating the adhesive and a thermostatically controlled heating element are incorporated. Gasket is placed on a bedplate on top of the tank and vertical studs on a hollow frame inside the tank are forced up by compressed air through holes to apply the adhesive at the desired spots. Various gasket sizes can be accommodated. Made by **Armstrong Cork Co.,** 1270 State St., Lancaster, Pa.

▲ For more details circle NED-643 K7 on enclosed inquiry slip ▲

LIQUID SPRING
2 in. long, develops 800-lb force



Employing a compressible liquid, model 416 liquid spring which measures only ½ in. in diameter by 2 in. long develops 800-lb force at ¼-in. stroke with an 80-lb preload. Springs have standard ⅜-24 mounting thread, and are preloaded and self-contained. Used in fabricating dies, this model spring reduces die costs by allowing simultaneous operations to be designed into compound dies, thus reducing the number of single purpose dies. Downtime is also considerably reduced. Made by **Taylor Devices Inc.,** 192 Main St., North Tonawanda, N. Y.

▲ For more details circle NED-644 K7 on enclosed inquiry slip ▲

Blowers, Gas Pumps & Vacuum Pumps

Sutorbilt Corp.—Construction details as well as performance charts on complete line of blowers, gas pumps, and vacuum pumps are presented in 8-page bulletin S-59F. Low, medium, and high pressure types are described.

▲ For more details circle NED-645 K7 on enclosed inquiry slip ▲

NEW!

REEVES® Vari-Speed MOTODRIVES

Sizes 200-300 for 1-5 hp.

• Hundreds of space-saving, space-fitting *standard* assemblies. Available in "C" flow or "Z" flow models, the new sizes are versatile additions to the full line (1-40 hp.) of REEVES Motodrives.

Write for your free copy of new catalog—Dept. ND33b-M571.

REEVES PULLEY COMPANY
Division of **RELIANCE Electric & Engineering Co.**
COLUMBUS, INDIANA

▲ For more details circle NED-646 K7 on enclosed inquiry slip ▲

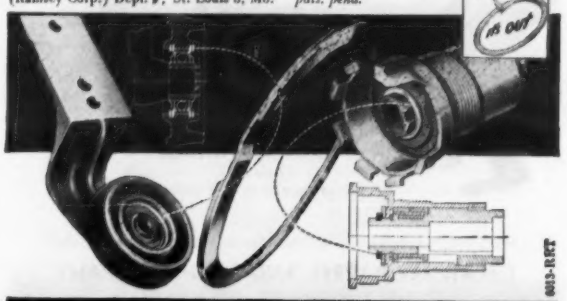
ROTATING or STATIONARY ASSEMBLIES held together EASIER with

SpiroLox Retaining Rings

Conveyor roller application at left shows how Spirolox attains neat, compact, simplified design, even on rotating assemblies. Stationary application of lock assembly illustrates how Spirolox can be applied to hard-to-reach places where retaining ring must operate in very confined space. Secret of Spirolox adaptability is patented *two-turn* construction, which makes possible unique locking characteristic... will not jump out of groove. Always provides a uniform shoulder... no lugs, no gap.

FREE DATA BULLETIN
Thompson Products, Inc., Piston Ring Div. (Ramsey Corp.) Dept. F, St. Louis 8, Mo.

U. S. Pat. No. 2,450,425 and Foreign Pats. Other pats. pend.



Rotating or Stationary

SPIROLOX—the Better Way to Hold Moving Parts TOGETHER!

▲ For more details circle NED-647 K7 on enclosed inquiry slip ▲

NEW 30" SEPARATOR
NEW 30" SEPARATOR
NEW 30" SEPARATOR

This versatile, new intermediate size separator completes the SWECO line. You can now select the exact size unit you need. It combines the outstanding features of both smaller and larger SWECO models. Screening area is 4.2 sq. ft.–four times that of the 18" model; 40% of the 48" model. A complete new 30" catalog is yours for the asking. Write for Bulletin S-119-175.

SWECO District Engineers will demonstrate the efficiency of SWECO Separators in your plant without obligation.

SWECO SEPARATORS

SOUTHWESTERN ENGINEERING COMPANY
4800 Santa Fe Ave., Los Angeles 58, Calif.
LUdlow 3-6262 Cable: SWECOLA

Engineers and Constructors . . . Manufacturers

▲ For more details circle NED-648 K7 on enclosed inquiry slip ▲

THE *Sutton* MOTOR DRIVEN PRESSURE BLOWER

THE WORLD'S *Most Dependable* PRESSURE BLOWER

THREE SIZES ¼, ½, 1 H.P.

USED FOR EXHAUSTING DUST, SMOKE, FUMES, VAPOR . COOLING AND DRYING . . CONVEYING COTTON, WOOL, SHAVINGS . . FORGE BLASTING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY to reduce weight and increase strength. CENTRIFUGAL TYPE. Delivers even, non-pulsating flow of air. Universal as to rotation and discharge. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6".

WRITE FOR LITERATURE AND PRICES

Sutton *Manufacturing Corp.*
112 W. WILSON AVENUE NORFOLK, VIRGINIA

▲ For more details circle NED-649 K7 on enclosed inquiry slip ▲

KEEP MACHINES RUNNING
...reduce maintenance costs,

with DEUBLIN ROTATING UNIONS

¾" Size Union Illustrated

for water, steam and air service!

Here is a compact, efficient rotating union—

- ★ LEAKPROOF
- ★ CORROSION PROOF
- ★ EASY TO SERVICE
- ★ VIRTUALLY FRICTIONLESS
- ★ PRECISION BUILT FOR LONGER LIFE
- ★ INTERCHANGEABLE with any other rotating union
- ★ VERSATILE—For Monoflow or Duoflow operation, available in ½", ¾", 1", 1¼" and 1½" sizes
- ★ MINIMUM TORQUE makes it ideal for high speed applications

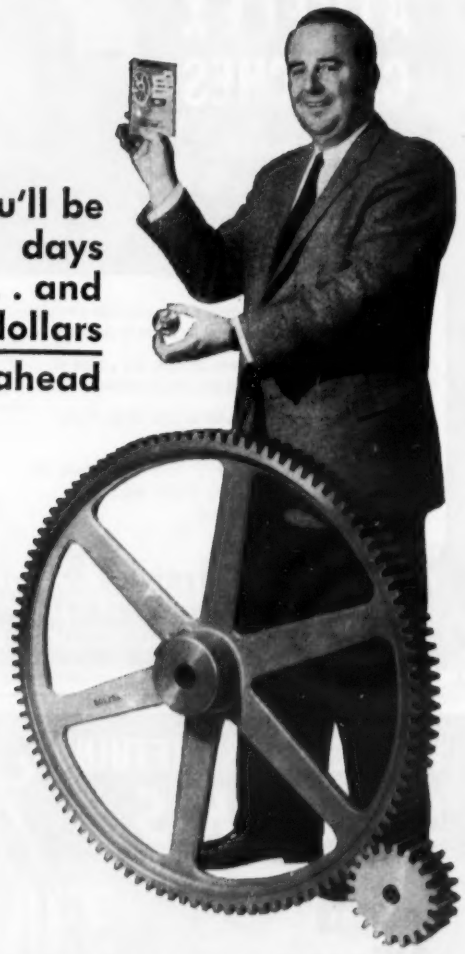
See how this dependable, new rotating joint can reduce inventory of replacement parts because of Deublin's standardization of sizes. Keep "shut downs" from wrecking your production schedules. Pays for itself many times over.

Write today for full details and prices.

DEUBLIN COMPANY
1151 Waukegan Road
Glenview, Ill. (Chicago Suburb)

For more details circle NED-650 K7 on enclosed inquiry slip

Plan your gear buying with "the book"



You'll be days ... and dollars ahead

The BOSTON GEAR CATALOG No. 56 is "the book" in constant use by cost-wise gear buyers everywhere. It lists over 2,000 types and sizes of standardized stock gears — all top-rated for precision and performance.

Why pay more (and wait) for specials when you can get Boston Gears to meet any specification FROM STOCK, nearby at FACTORY PRICES? Get your copy of Catalog No. 56. Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

CALL YOUR **BOSTON Gear** DISTRIBUTOR

7124 TRANSMISSION PRODUCTS OFF-THE-SHELF — AT FACTORY PRICES

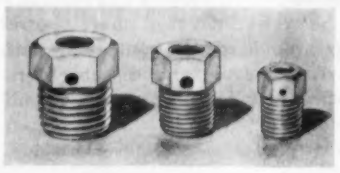
For more details circle NED-651 K7 on enclosed inquiry slip

SAFETY AIR GUN
air umbrella prevents chip flyback

Face and eye accidents are minimized with use of the redesigned Guard-air pistol-type safety air gun for cleaning machined holes. Gun sets up a protective umbrella of high pressure air to prevent chip flyback. Gun has internal pressure control in addition to external knurled stop nut for fine adjustments. Air pressure can be held to exact amount required on any specific job regardless of the pressure in the air lines. Gun fits standard air lines, and air seepage and bleeding are eliminated by leakproof valve. It can be equipped with extensions of varying length and shape. Made by **Union Engineering Corp.**, Dept. NED, South Hadley Falls, Mass.

For more details circle NED-652 K7 on enclosed inquiry slip

BLEEDER VALVES
have dry seal pipe thread



Made of brass with a needle type alloy socket screw for use with a standard hex wrench, these bleeder valves have several diverse applications. Uses are as a level test cock, purge plug, air vent on oil burner fuel units, and on hydraulic cylinders and pumps. They have dry seal pipe threads and are offered in ¼, ⅛, and 1/16-in. sizes. Made by **Hydrovalve Co.**, Dept. N, 1319 Utica Ave., Brooklyn 3, N. Y.

For more details circle NED-653 K7 on enclosed inquiry slip

PRODUCTION TIME METERS
employ a six-digit auto odometer

An automobile odometer is employed for the first time in KT line of time meters which are used to check operating time, down-time, and total running life of machines and tools. The odometer contains six digits, compared with five in the old meter design, and measures down to 1/10 hour or minute. Other features include a reset on most models, a temperature range from −67 to 150° F, and easy-to-connect terminals. Entire mechanism is enclosed in a dust and moisture-resistant case. Square or round cases are available in 2½ or 3½-in. size for mounting on panels or test equipment. Ratings include 120, 240, or 480 v at 50 or 60 cycles. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

For more details circle NED-654 K7 on enclosed inquiry slip

UDYLITE "DROP-IN" RUBBER LINERS

FOR STORAGE OR MIXING OF CORROSIVE SOLUTIONS

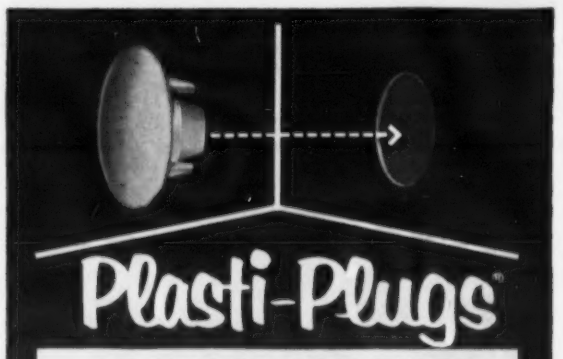
Just insert the pre-shaped rubber liner in any standard 55 gallon drum and immediately you have an added tank for temporary or permanent storage of corrosive solutions. Prompt shipment from Udylite stock.

ONLY $19.75

THE Udylite CORPORATION DETROIT 11, MICHIGAN

WORLD'S LARGEST PLATING SUPPLIER

For more details circle NED-655 K7 on enclosed inquiry slip



Plasti-Plugs

45 STANDARD SIZES

FASTEX® Plasti-Plugs® snap-in type plastic plugs—are available for a wide range of applications, including:

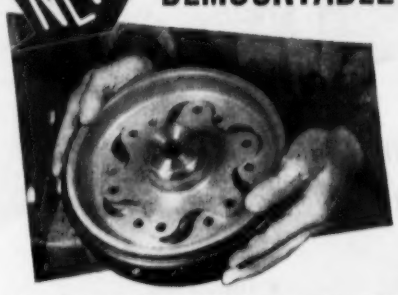
- Ventilation Holes
- Access Holes
- Sealing Plugs
- Frictionless Glides
- Indicator Buttons
- Appliance Feet
- Spacer Buttons
- Conduit Holes

Available in several plastic materials. Plasti-Plugs can be color-matched to your product saving expensive rack painting, and they just snap in.
Write for FREE Plasti-Plug Folder.

FASTEX
195 Algonquin Road, Des Plaines, Illinois
In Canada: SHAKEPROOF-FASTEX
Division of Canada Illinois Tools Ltd., Toronto, Ont.
A DIVISION OF ILLINOIS TOOL WORKS

For more details circle NED-656 K7 on enclosed inquiry slip

NEW **Rapistan®** DEMOUNTABLE WHEEL



now in wide range of sizes

OUT-WEARS MOLDED-ON TIRES-CUTS COSTS 65%

You get 50% longer life from Rapistan MB DEMOUNTABLE WHEELS. You cut costs, because MB tires are replaceable — in 3 to 5 minutes, and cost far less than new wheels or re-molding tires.

The secret of Rapistan MB Wheel's long life is in the exclusive V-shaped steel tire backing. Load force is deflected toward the center of the tire, keeping rubber firm and dense, minimizing bulging and "chunking out," reducing friction and wear.

Available in 6", 8" and 10" dia. Watch for new 3" tread size in 10" dia. for high capacity use.

Write for New Bulletin MB-57 — FREE!

Rapistan — fastest growing name in casters

The RAPIDS-STANDARD CO. INCORPORATED
104 Rapistan Bldg.
Grand Rapids 2, Michigan

For more details circle NED-657 K7 on enclosed inquiry slip

SPECIFY **Spaulding** PRODUCTS

for all your materials handling needs and replacement costs will be lower

Spaulding Vulcanized Fibre Materials Handling Products are smooth, tough and durable. They are light in weight, they resist grease, oils, moisture, impact and abrasion. They won't splinter, rust or corrode and are available in all standard sizes and shapes or custom-made to your requirements.

Send for FREE catalog today.

SPAULDING FIBRE COMPANY, INC.
Dover, N. H.

Please send me your free catalog of Spaulding Vulcanized Fibre materials handling products.

NAME _____
FIRM _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

For more details circle NED-658 K7 on enclosed inquiry slip

DATA you need

to select improved valves for your pumps

Famous for sustained efficiency under widely varied service conditions, DURABLA Pump Valve Units have been redesigned to incorporate a new taper-lock* stud, self-locking nut and drop-on guard. This improved design offers *seven new points of superiority.*

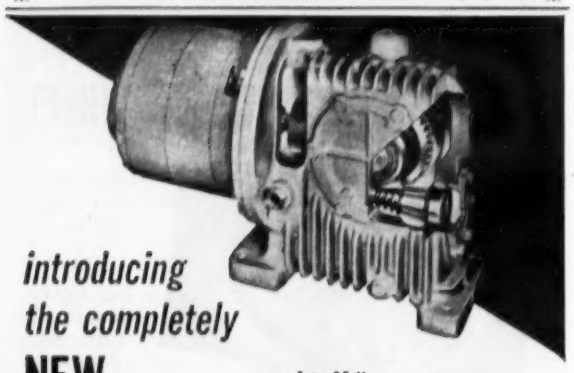
The booklet shows how DURABLA Pump Valve Units can benefit your pumps. Includes design details, materials available, table of seat sizes and dimensions. Send for free copy of Form 400 NED107.

DURABLA MANUFACTURING COMPANY
114 Liberty Street, New York 6, N. Y.

DURABLA®

*Patent Pending DM-29

For more details circle NED-659 K7 on enclosed inquiry slip



introducing the completely

NEW *Cone-Drive* GEARMOTOR

- 1 to 25 Horsepower
- Extended shaft
- Shaft mounted
- 27 Output speeds
- Standard NEMA D-flange motors
- Compact double-enveloping worm gear design for high efficiency
- High output torque ratings
- Ask for catalog 57. It's free!

CONE-DRIVE GEARS
Division, Michigan Tool Company

DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
7171 E. McNICHOLS ROAD • DETROIT 12, MICHIGAN

For more details circle NED-660 K7 on enclosed inquiry slip

New model 36 SIMPLICITY CONVEYORS serve almost any conveying operation

The new Model 36 Conveyor is designed to meet the needs of manufacturers who do not require the capacity of heavy duty conveyors. Lightweight and compact, the low cost Model 36 is ideal for handling a great variety of light bulk materials with a minimum of maintenance.

The Model 36 makes provisions for any one of 5 different pan widths, from 4" to 12", and can be supplied in mild steel or (on special order) aluminum or stainless steel; with or without covers.

Stocked in 5' and 10' sections, units can be assembled up to 50' in length using only one drive assembly.

The Model 36 Conveyor is less than 14" in over-all height and requires only ¼ hp to 1½ hp motor (depending on the length of the conveyor).

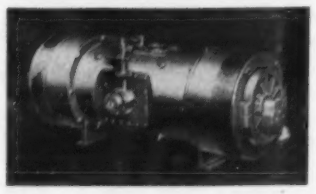
Write today for more information about the versatile, self-cleaning Model 36 Conveyor.

206

Simplicity
TRADE MARK REGISTERED
ENGINEERING COMPANY • DURAND 15, MICH.

For more details circle NED-661 K7 on enclosed inquiry slip

FREE-PISTON ENGINES units range from 125 to 1000 hp



Stationary, mobile, and marine equipment are applications for free-piston engines which produce pneumatic power. Efficient users of fuel, they have an output of 125 shaft hp from a single gasifier and up to 1000 shaft hp when used in multiple. Range is made possible by two types of engines.

Single-stage model DL produces 500 shaft hp and can be combined in multiples with one turbine to reach a peak of several thousand horsepower. Two-stage model FP-165 produces 250 shaft hp with turbocharging and 125 shaft hp without turbocharging. The free piston gas turbine plant can be made directly reversible, providing up to 65 per cent of forward power rating in reverse.

Free-piston engines burn a wide range of fuels, provide high starting torque, decelerate rapidly, and operate at temperatures of about 1000° F. Pneumatic output power can be converted to shaft power through a turbine to provide easily controlled variable speed, high starting torque, and direct reversing. Made by **Baldwin-Lima-Hamilton Corp.**, Hamilton Div., Box 131, Hamilton, Ohio.

For more details circle NED-662 K7 on enclosed inquiry slip

WELD POSITIONER CONTROL provides for uninterrupted circumferential welding

Built for use with automatic fusion welding machines, this EF-7871 heavy-duty weld positioner control provides for an uninterrupted circumferential weld. Table rotation is accomplished by a ½-hp dc shunt wound motor geared directly to the table. Starting and stopping action is by means of an electrically-operated clutch-brake. Table reaches maximum speed or stops in 3 cycles.

The control will maintain speed within ±2½ per cent at 60 rpm of motor shaft, ±½ per cent at 1800 rpm. The compact control mounts on rear of positioner and has input of 220/440 v, 60 cycles. Cabinet is fan cooled and air filtered. Operator's pendant remote control regulates all operations of the positioner.

Other features include an alternating current motor starter to operate table tilt motor, a welding speed tachometer, a field loss protective relay, reversing and dynamic braking, and centrally located terminal connections. Made by **Weltronic Co.**, 19494 W. Eight Mile Rd., Detroit 19, Mich.

For more details circle NED-663 K7 on enclosed inquiry slip

Direct Temperature Reading

On ANY SURFACE or in ANY MATERIAL

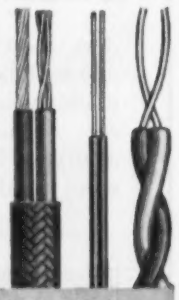
The Xactemp Hand Pyrometer is the answer to quick, accurate temperature determination in countless processes and operations. And, it's so convenient to use.

Model LT-840 Xactemp Hand Pyrometer can be used with surface, ribbon, needle, and handle thermocouples and with rigid and flexible extension arms. All are quickly interchangeable—without adjustments. Recommended for field service, laboratory, and production-line use.

Ask for Bulletin XT351

5648

"SERV-RITE"
THERMOCOUPLE WIRE and EXTENSION WIRE



Most standard wires and insulations are carried in stock for quick delivery. Other insulations, in long or short runs, are manufactured to specifications.

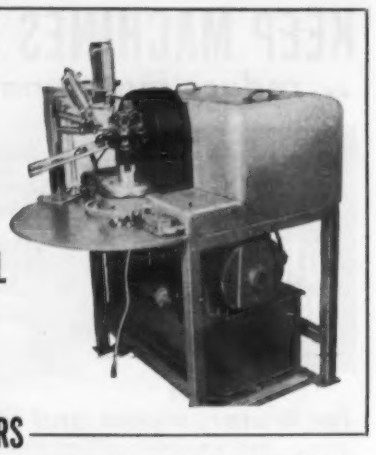
Serv-Rite wire is insulated in Gordon's own wire plant under rigid controls to assure consistent, uniform high quality.

Bulletin 1200 gives general application data, description of the wires, and ordering information. Ask for a copy.

CLAUD S. GORDON CO.
Manufacturers—Engineers—Distributors
621 West 30th Street, Chicago 16, Ill.
2013 Hamilton Ave., Cleveland 14, Ohio

For more details circle NED-664 K7 on enclosed inquiry slip

GENESEE HYDRAULIC FIELD COIL WINDER FOR ALL RECTANGULAR FIELD COILS IN ELECTRIC MOTORS



1. Automatic turn counter, easily adjustable.
2. Level winding with fluid power.
3. Tandem winding and automatic cut-off for multiple or single coils with automatic ejection.
4. Instantly adjustable speed and torque control of winder. Maximum speed: 3600 rpm.
5. Positive positioning of flyer, with one turn accuracy, requiring no clutches or brakes.
6. Open-type jaws for ease of taping on the machine, to prevent loosely taped coils.
7. Automatic tape dispenser available.
8. Nylon wire guides and pulleys to protect insulation and eliminate wire twist.

Send sample coils for recommendation of model required

GENESEE MACHINE BUILDERS, INC.
1732 HUDSON AVENUE, ROCHESTER 17, NEW YORK

For more details circle NED-665 K7 on enclosed inquiry slip

FAWICK AIRFLEX CLUTCHES

...The finest in Air Power Transmission

Fawick CB Airflex Clutch

- ★ Full operating power and continuous unmatched performance assured by drum-type clutch design.
- ★ Highest horsepower capacity per pound of clutch weight and per dollar invested.
- ★ Many types available in size ranges from 4" to 66" diameter.
- ★ Write Fawick today . . . Find out how you can increase productivity of your machines at lowest possible cost.

FAWICK AIRFLEX DIVISION
FAWICK CORPORATION
9919 CLINTON RD., CLEVELAND 11, O.
IN CANADA: FAWICK CANADA LTD., TORONTO

FAWICK Airflex
INDUSTRIAL CLUTCHES AND BRAKES

For more details circle NED-666 K7 on enclosed inquiry slip

WHEREVER SOMETHING STICKS

Alert Production Men Use

IMS **Silicone Spray!**

ON ROLLS — EMBOSSING and STAMPING DIES — ON PLASTIC — BRASS BEARINGS — ETC., ETC.

WHEREVER A CLEAN, EASY-TO-USE PERMANENT LUBRICANT IS NEEDED.

In modern production maintenance work, this pure silicone fluid is cutting rejects everywhere. Try it today. The most economical way to adapt the miracle low surface tension of silicone fluid to all your sticking problems.

PRICES: (delivered)
Single Cans, ea. . . $2.00
Unbroken dozen . .$18.00
Unbroken gross . $197.40

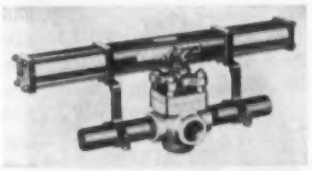
ORDER SOME TODAY!

INJECTION MOLDERS SUPPLY CO.
3514 LEE RD. CLEVELAND 20, O.

For more details circle NED-667 K7 on enclosed inquiry slip

For more details circle NED-668 K7 on enclosed inquiry slip

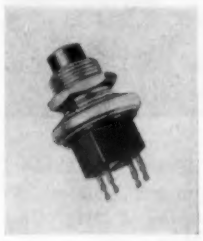
PLUG VALVE OPERATORS
for air, gas, oil, or water use



Designed for pressures up to 200 psi, this line of medium duty plug valve operators is suited for use with air, gas, oil, or water. They are adaptable to process cycling, safety and automatic shutoff, or any combination of these operations. Model FM for valves requiring low torques is a floating bar type operator with two single-acting cylinders. Model TM for higher torque requirements has two double-acting cylinders. Model QM consists of two model FM or TM operators mounted on a common bracket for high torque needs. Line offers torques up to 94,000 lb-in. Dual pipe, and bonnet and flange type valve mounting brackets are available. Wide variety of valves can be supplied for automatic or remote control of these operators. Made by **Ledeen Mfg. Co.**, 3348 N. Gilman Rd., El Monte, Calif.

For more details circle NED-671 K7 on enclosed inquiry slip

PUSHBUTTON SWITCH
is ½-amp double-pole model



This double-pole model 35-1 pushbutton switch is a momentary contact, single-throw unit rated ½-amp, 115 v ac, resistive load. Life expectancy is over 100,000 operations. Housing and button are molded phenolic. Unit has a 15/32 in.-32 threaded mounting bushing with a hex nut. Terminals are solder type only. Switch is presently furnished as normally-open, with a red button. Made by **Grayhill, Inc.**, Dept. NED, 561 Hillgrove Ave., LaGrange, Ill.

For more details circle NED-672 K7 on enclosed inquiry slip

RADIOISOTOPE-EXCITED LAMP
emits marking light for 10 years

Marking illumination is emitted for periods of up to 10 years or more by model 535 radioisotope-excited lamp, with no power or maintenance required. This model weighs half as much as the 20-lb model announced earlier and measures only 6 in. long Its luminous diameter of 5 in. combined with 1000 microlambert brightness makes lamp visible at 500 yd. Lamps can be used in mining, transportation, marine, and heavy industries, and for low-level civil defense marking, or other uses where little or no power is available. They can be supplied to emit blue, green, yellow, or orange-red light. Made by **United States Radium Corp.**, Dept. N, Morristown, N. J.

For more details circle NED-673 K7 on enclosed inquiry slip

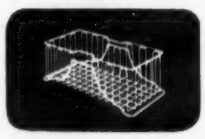
A precision operation

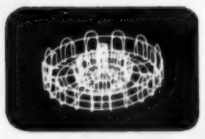
Torque limiting device takes out guesswork. Designed for use with any standard tapping motor. *Voltage Balancer* eliminates need for voltage regulator. *Torque Control Knob* assures expanding tube to required size.

ELLIOTT Company
LAGONDA DIVISION, SPRINGFIELD, OHIO

For more details circle NED-675 K7 on enclosed inquiry slip

Formed Wire Products





DESIGNED, FABRICATED, WELDED AND FINISHED IN PRODUCTION QUANTITIES

WE DESIGN . . . all sizes, shapes . . . or we work from your design.

WE FABRICATE . . . from low carbon steel wire, flat or round to ½ inch diameter.

WE WELD . . . by resistance welding at all points of contact.

WE FINISH . . . by swaging all butt welds, beveling wire ends; zinc plating or polyvinyl coating in any color to your specifications.

We quote from your blueprints by return mail.
Your inquiry is invited.

Peerless FORMED WIRE PRODUCTS

PEERLESS WIRE GOODS COMPANY, INC.
2706 FERRY STREET . LAFAYETTE, INDIANA

For more details circle NED-669 K7 on enclosed inquiry slip

AO 2-Tone Ultrascopic Safety Glasses

NEW! Features true safety of a *safety frame* PLUS smart good looks. Frames, eyewire and lenses are designed and fabricated to give maximum protection. AO plaque on frame is your guarantee of a true safety frame. Spatula temples. 6 Curve Super Armorplate clear, medium Calobar, dark Calobar and extra dark Calobar lenses. Also available with clear Plastolite lenses. Complete details in our new Brochure No. S-6761, just off the press.

Always insist on the AO Trademark on lenses and frames

American Optical COMPANY
SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS *Branches in Principal Cities*

For more details circle NED-670 K7 on enclosed inquiry slip

solve all YOUR sealing problems

Garlock KLOZURE* Oil Seals

Every part of KLOZURE Oil Seals is engineered to give superior service on the job for which it is intended. Through the various combinations of sealing elements, springs, and cases, the proper KLOZURE Oil Seal can be developed for any requirement. Whether your sealing problem involves high shaft speeds or temperatures; corrosive liquids, synthetic fluids, or limited space . . . there is a Garlock KLOZURE Oil Seal to solve it. Why not investigate and see?

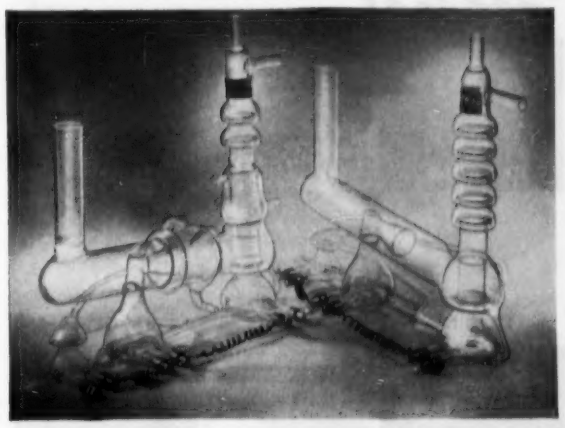
*Registered Trademark

THE GARLOCK PACKING COMPANY, PALMYRA, N. Y.
For Prompt Service, *contact one of our thirty sales offices and warehouses throughout the U.S. and Canada.*

GARLOCK

Packings, Gaskets, Oil Seals, Mechanical Seals, Rubber Expansion Joints, Fluorocarbon Products

For more details circle NED-674 K7 on enclosed inquiry slip



*Price: Air-cooled $185, Water-cooled $225

GF-20. 20 liters per second. Two-stage, fractionating pump. Ultimate pressure: 5×10^{-7}mm Hg without a cold trap. Limiting forepressure: 0.2 mm Hg.

High vacuum at a low price . . .

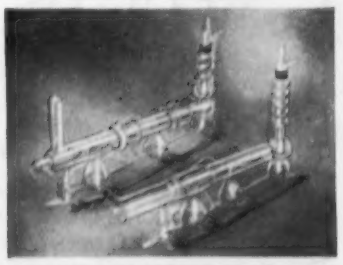
You can reach pressures as low as 5×10^{-7}mm Hg quickly with these CEC glass oil-diffusion pumps.

Their simple operation and low cost ($68 to $345*) make them ideal for laboratory and small industrial applications.

In addition, the glass is resistant to many corrosive gases; you can inspect directly the level and condition of the pump fluid in the boiler(s); you can see the pump in actual operation; you can clean the pump easily and quickly.

*Price: $68

G-4. 4 liters per second. Air-cooled, single-stage, semi-fractionating pump. Ultimate pressure: 5×10^{-6}mm Hg without a cold trap. Limiting forepressure: 0.1 mm Hg.



*Price: Air-cooled $260, Water-cooled $345

GF-25. 25 liters per second. Three-stage, fractionating pump. Ultimate pressure: 5×10^{-7}mm Hg without a cold trap. With careful adjustment of heater input and cooling, and after baking all metal parts of the system, you can reach 8×10^{-8}mm Hg. Add a cold trap and you can drop to the 10^{-9}mm Hg region.

Send for Bulletin No. 12-20 for complete technical data.

*Prices F.O.B. Rochester. All prices subject to change without notice.

Consolidated Electrodynamics

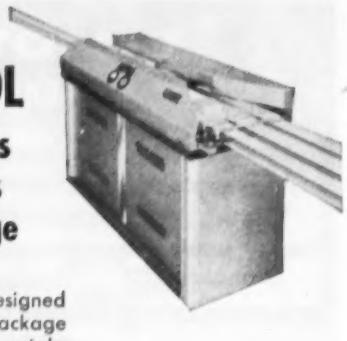
CEC Rochester Division, Rochester 3, N.Y.
formerly Consolidated Vacuum

SALES AND SERVICE OFFICES IN PRINCIPAL CITIES

For more details circle NED-676 K7 on enclosed inquiry slip

SELECTROL

Weighs, Sorts and Classifies Every Package



This machine is designed for high-speed package production lines. It weighs accurately in motion with no interruption of package flow or spillage. Overweights and underweights are smoothly diverted from line for trimming. Weight tolerances are adjustable. Rejection accuracy can be held to one gram, plus or minus, at speeds up to 100 per minute. Write for complete details.

Exact Weight SCALES

Find us in your local 'Yellow Pages'

Sales and Service Coast to Coast

THE EXACT WEIGHT SCALE CO.
930 W. FIFTH AVE., COLUMBUS 8, OHIO
In Canada: P.O. Box 179, Station S, Toronto 18, Ont.

BETTER QUALITY CONTROL . . . BETTER COST CONTROL

For more details circle NED-677 K7 on enclosed inquiry slip

Federal ONE STOP—SHORT RUN STAMPING SERVICE:

The next time you require parts of any shape or size up to 10"x 14"x ¼" thick of any stampable material send your print, sketch or part for an . . .

*Analyzed Quotation

Federal TOOL & MFG. CO.
Quality Stampings in Small Quantities
3618 Alabama Ave., Minneapolis 16, Minn.

For more details circle NED-678 K7 on enclosed inquiry slip

PLASTIC TEMPLATES

Made to Your Specifications

FOR QUICK, EASY AND ACCURATE DESIGN OF YOUR PRODUCT . . . FOR USE IN YOUR OWN DRAFTING DEPARTMENT OR FOR A GIVE-AWAY ADVERTISING ITEM . . . THE DAY AFTER DAY UTILITY OF YOUR TEMPLATE WILL KEEP YOUR FIRM'S NAME BEFORE THE USERS OF YOUR PRODUCT AT ALL TIMES!

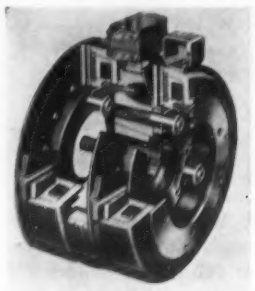
FOR QUOTATION SEND DRAWING AND STATE QUANTITY DESIRED.

Write for our catalog of over 30 useful drafting templates and pencil lettering guides.

DU-ALL TEMPLATES
P. O. Box 3041
DALLAS, TEXAS

For more details circle NED-679 K7 on enclosed inquiry slip

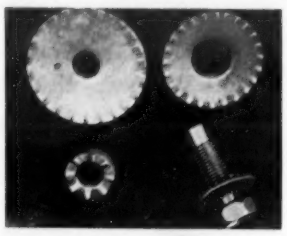
BRAKES & CLUTCHES are electromagnetically actuated



Electromagnetically operated, disk type Dyna-torQ friction clutches and brakes are suited for use in a wide range of equipment including machine tools, material handling equipment, packaging machines, and processing units. They can be controlled remotely and are compact in design. Reported features include rapid response, smooth engagement, and automatic adjustment. Sizes and capacities to meet most needs are available. Made by **Eaton Mfg. Co.**, Dynamatic Div., Dept. NED, 3307 14th Ave., Kenosha, Wis.

For more details circle NED-680 K7 on enclosed inquiry slip

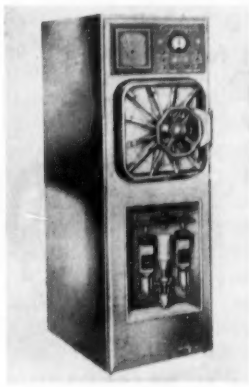
THREE-WAY LOCK WASHER has barbs on both ID and OD



Barbs on both inside diameter and outside diameter of this Hi-Lock lock washer assure secure locking in excessive vibration applications. Flat and lock washer are single unit that establishes vertical, horizontal, and rotary locking action. Typical applications are on auto hood mechanisms, trunk locks, and doors; farm implements; electrical equipment; and appliances. Made by **Hi-Standard Stamping & Mfg. Co.**, 18228 James Couzens, Detroit 35, Mich.

For more details circle NED-681 K7 on enclosed inquiry slip

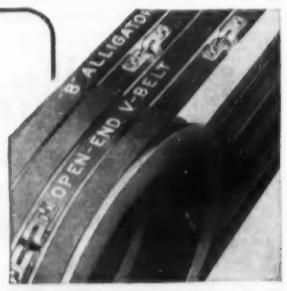
GAS STERILIZER employs an ethylene oxide mixture



A special 11-per cent ethylene oxide mixture known as Cryoxcide is used in this Cry-o-therm gas sterilizer, applicable to lab or processing industry sterilization of heat or moisture sensitive materials. The new gas is packaged in low pressure, disposable containers. One or two cans are used for each load for 2 or 4-hour cycles, respectively. Items to be sterilized can be prepackaged in paper, pliofilm and similar commercial wraps. Chamber measures 16 x 16 x 30 in., with larger units offered. Operation is automatic, except for loading and unloading. Made by **American Sterilizer Co.**, Scientific Div., Dept. 714, Erie, Pa.

For more details circle NED-682 K7 on enclosed inquiry slip

WHICH V-BELT is best for you?



If the correct size of endless V-Belt is not readily available, or if you have to tear down machinery to install, then the best belt to use is open-end V-Belting fastened with

ALLIGATOR **V-BELT FASTENERS**

★ In this way you can make up V-Belts in *any length* to fit *any drive* the fast economical way—V-Belts that perform exceptionally well.

★ In contrast to link-type belts these ALLIGATOR fastened V-Belts have just *one* strong joint . . . *stretch and follow-up maintenance are reduced to a minimum.*

ALLIGATOR **INTRODUCTORY V-BELT DRIVE UNITS**

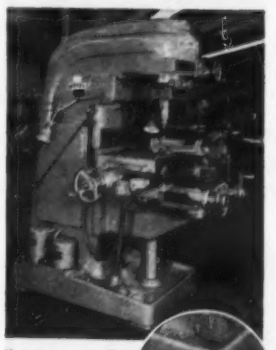
contain V-Belting, Fasteners and Tools —everything you need in one compact package to make up V-Belts quickly. Available in sizes A, B, C & D.

Ask for Bulletins V-215 and V-216
Order From Your Distributor

FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street, Chicago 44, Illinois

For more details circle NED-683 K7 on enclosed inquiry slip

PATENTED MACHINERY MOUNT MADE OF VINYL and CORK REDUCES VIBRATION and NOISE



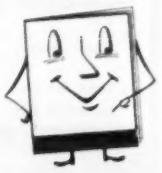
Kearney & Trecker milling machine installed at low cost on firm, high density AIR-LOC mounts.

Air-Loc® 4·17·4

machine mounts give you . . .

1. *Complete resistance to oil, water, etc.*
2. *Permanent precision shimming is easy.*
3. *Reduced machine vibration & noise—as much as 85%.*
4. *Low initial cost.*
5. *Reusable when you move machines.*
6. *Eliminate bolting and cementing.*

Free booklet tells the whole story. Send for your copy, and free samples.



Air-Loc® DIVISION

CLARK, CUTLER, McDERMOTT CO.
FRANKLIN, MASSACHUSETTS

For more details circle NED-684 K7 on enclosed inquiry slip

ALL POINTS POINT TO SOUTHERN

NEED specials? Check with Southern Screw first! Every fastener—special or regular—meets or exceeds standard specifications.

EVERY metal, every finish, every method used in producing Southern Fasteners is aimed at one end result—Quality.

WHEN there's a hitch in your production—call the Southern Screw representative. He's a fastener specialist.

SERVICE Quick, Service *Now.* Over one Billion fasteners in stock. Warehouses north, south, east and west!

For Southern's Catalog, write on Company letterhead to Box 1360-NED, Statesville, N. C.

Wood Screws • Tapping Screws • Machine Screws & Nuts • Dowel Screws • Drive Screws • Stove Bolts • Carriage Bolts • Hanger Bolts

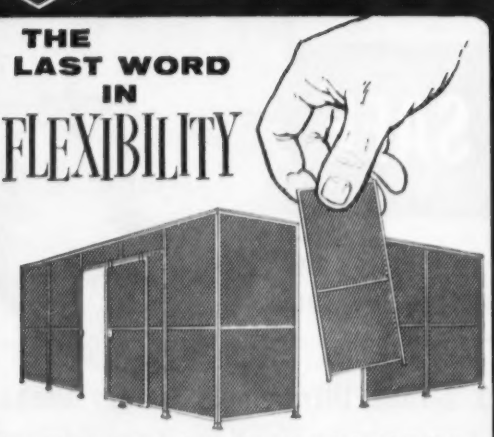
Southern SCREW COMPANY
STATESVILLE • NORTH CAROLINA

Warehouse: New York • Chicago • Dallas • Los Angeles

For more details circle NED-685 K7 on enclosed inquiry slip

WIPCO WIRE PARTITIONS

THE LAST WORD IN FLEXIBILITY



WIPCO woven-steel wire partitions are designed to fit any area, regardless of height, location of doors and other openings, etc. Easy and economical to erect, your own men can put them up without outside help! Use them over and over again, salvaging each individual section for use in new erections. Available in *standard* sections from stock—or *custom-built* for any requirement. WIPCO partitions are easy to paint and clean—require little or no maintenance! For increased efficiency and flexibility at lower cost, get the facts on WIPCO wire partitions!

Write Today for Bulletin P-55!
WIRE & IRON PRODUCTS INC.
1727 SIXTEENTH STREET, DETROIT 16, MICHIGAN

For more details circle NED-686 K7 on enclosed inquiry slip

For Your Products

Among the wide range of shapes, sizes, closures, and colors we now produce, there's one that will fit your needs—*without* mold costs.

Jewel-colored Clearsite containers are moisture-tight, dust-proof, easy to multi-color print. Because they are shatter-proof, they minimize breakage cost—their light weight means lower shipping charges. For full details address Dept. N.

Clearsite

CELLUPLASTIC CORPORATION
Sales and Executive Offices • Newark, N. J.

For more details circle NED-687 K7 on enclosed inquiry slip

In recent years Mosinee has created hundreds of distinct types of sulphate paper to meet specialized packaging, processing and fabricating needs. What's more, Mosinee has the technology to readily custom-tailor these papers (or develop and quantity-produce new papers) to meet thousands of additional requirements.

Send for information file describing Mosinee's extensive research facilities, years of experience and technical consultant service.

Mosinee
Paper Mills Company • Mosinee, Wisconsin

For more details circle NED-688 K7 on enclosed inquiry slip

ARMSTRONG WRENCHES

Types and Sizes for Every Industrial Use

ARMSTRONG Wrenches have engineered designs, a wide safety factor of extra strength, accurately machined openings that go over screw heads or nuts easily, grip firmly—will not slip, round corners or mar faces.

Drop forged from special high tensile carbon and alloy steels, heat treated to an exactly predetermined balance of hardness, toughness and tensile strength. ARMSTRONG Wrenches will not "chew out," will stand up through years of service, making work faster, easier and safer.

In sizes and types, ARMSTRONG Wrenches comprise the most complete line of industrial wrenches manufactured. Specify "ARMSTRONG" when ordering wrenches.

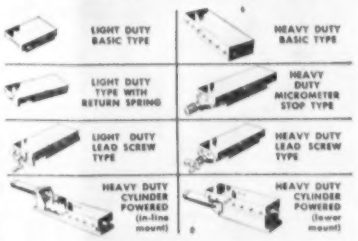
Write for Catalog

ARMSTRONG BROS. TOOL CO.
5245 W. ARMSTRONG AVE. • CHICAGO 30, ILL.

For more details circle NED-689 K7 on enclosed inquiry slip

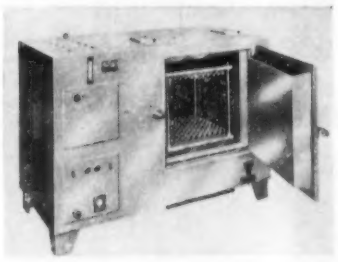
PRECISION SLIDE ASSEMBLIES
line now includes 132 models

Precision slide assemblies can be supplied in a broad range of types and sizes for building up special machines and production equipment. The 132 standard models have stroke lengths from ¾ to 8 in. and slide working surfaces from 2 x 3 in. to 8 x 24 in. Light and heavy duty models have milled or hand-scraped sliding surfaces. In addition to basic slides with male and female members and gib and adjusting screws, other types include such control features as a return spring, micrometer stop, lead screw, and air or hydraulic cylinder. Female member slides on dovetail ways. High tensile gray iron castings, heat treated to eliminate distortion, are machined and ground parallel top and bottom. Made by **Russell T. Gilman, Inc.**, Dept. ND, 623 Beech St., Grafton, Wis.



For more details circle NED-690 K7 on enclosed inquiry slip

AGING OVENS
hold 49 to 240 samples



Accelerated ASTM aging tests at controlled temperatures for rubber, plastics, textiles, insulations, roof coverings, varnishes, and paints can be conducted in Con-Wate mechanical convection aging ovens. Equipped with Power-O-Matic control with a temperature range to 180° F, they hold from 49 to 240 samples at one time, suspended on 1½-in. centers in a stretch suspension rack. Temperature is controlled within ±½° C over the entire range. Double wall ovens have stainless steel interiors and 4-in. Fiberglas insulation on all six sides. Low watt density Modella heater bank is in a separate chamber. Ovens are made in four sizes from 1 to 10 cu ft. Standard voltage is 115 v, or 230 v single-phase, 50/60 cycles ac. Made by **Blue M Electric Co.**, 138th & Chatham St., Blue Island, Ill.

For more details circle NED-691 K7 on enclosed inquiry slip

Rigid Plastic Pipe

Alpha Plastics Inc.—Tables of pipe sizes, specific chemical applications, physical properties, temperature factors for various working pressures, and other data, including installation instructions, are found in 12-page illustrated catalog A 557 on corrosion resistant rigid polyvinyl chloride pipe. Regular and high impact types are covered.

For more details circle NED-692 K7 on enclosed inquiry slip

NOW GRAVELY Gives You Push Button Snow Removal!

• CHOICE OF 3 SNOW REMOVAL TOOLS •
Each With New Gravely Self-Starter

A new experience in snow removal—simply push the button and your Gravely Tractor is ready for the toughest snow removal job!
The *only* 5-HP Tractor that offers a choice of Snowblower, Snow Plow or Power Brush for snow removal. Choose the tool to fit your particular job! New Steering Sulky also available.

• ONE TRACTOR — 30 ATTACHMENTS •

30 tools to choose from for year 'round grounds maintenance tasks. From 75" gang mowers to 48" Snowplow, the Gravely saves time and money all year . . . *Write for catalog . . . or "How to Solve Removal Problems" . . . TODAY!*

GRAVELY TRACTORS, INC.
BOX 80 DUNBAR, WEST VIRGINIA

For more details circle NED-693 K7 on enclosed inquiry slip

Need an invisible motor for your product...

Call Jack & Heintz—America's leading specialists in *Customized* motors (⅛ to 5 hp). We'll give you a motor so integral with your product that it seems almost invisible! A motor that electrically, mechanically and physically blends with and fits your product perfectly.

We can make a motor flush, give it a special finish . . . stretch it tall or squat it flat. We can customize for ambient temperature ratings. Make a motor submersible. Increase torque! Reduce noise! You name it.

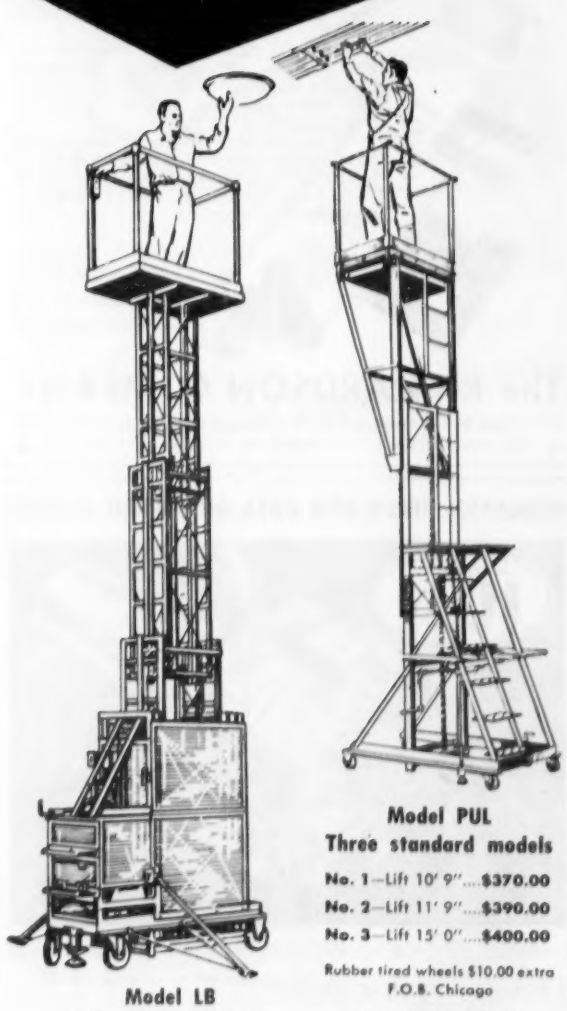
So let us design a motor for your product. We'll fit a motor to it that will make your product perform the way you want it to . . . look as good as it should . . . last as long as you say it will . . . and sell faster because of it.

For further information, write to: Jack & Heintz, Inc., 17629 Broadway, Cleveland 1, Ohio.

JACK & HEINTZ
CUSTOMIZED ELECTRIC MOTORS

For more details circle NED-694 K7 on enclosed inquiry slip

90% of overhead servicing jobs can be done faster and with perfect safety with these ECONOMY Hi-Reach Telescopers!



Model LB
Hi-Reach Telescopers
Four heights 20 ft. to 35 ft.
Standard Models from $1510.00 up.

Model PUL
Three standard models
No. 1—Lift 10' 9"....**$370.00**
No. 2—Lift 11' 9"....**$390.00**
No. 3—Lift 15' 0"....**$400.00**
Rubber tired wheels $10.00 extra F.O.B. Chicago

Custom built Hi-Reach Telescopers up to 100 ft.
Write for complete catalogue

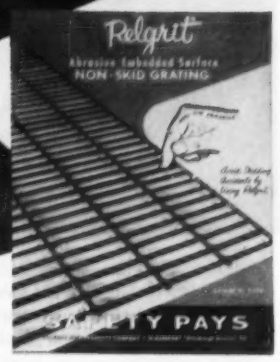
Headquarters for standard and special built overhead service lifters and material handling equipment since 1901

ECONOMY ENGINEERING
4519 West Lake St., Chicago 24, Illinois

For more details circle NED-695 K7 on enclosed inquiry slip

NEW CATALOG

describes absolutely non-skid RELGRIT abrasive embedded grating



free upon request Bulletin R655B

Reliance Relgrit abrasive embedded gratings and stair treads are completely described in this new catalog. Made by embedding abrasive particles in deep V-grooves in the bearing and cross bars, Relgrit is absolutely skid-proof even when wet or covered with oil. Unaffected by oil, grease, common industrial acids and chemicals, and longer wearing than steel, the Relgrit surface will last as long as the metal grating itself. If you have operations where floors become safety hazards, you will want to know more about Reliance Relgrit. Reliance Steel Products Company, P. O. Box 510-M, McKeesport, Pa. *(Advt.)*

▲ For more details circle **NED-696 K7** on enclosed inquiry slip ▲

Lower Costs with Laminated Plastics by Richardson

Lower production costs can be yours with Richardson plastic laminates—which have high strength, light weight, high electrical and heat insulation, good machinability and other properties.

Richardson laminates are used more and more in TV sets, radios, printed circuits, communication equipment, bushings, bearings, gears, and for countless other parts.

Available in sheet, rod, or tube form. Paper, fabric, or glass base. Fabricated parts. Wide selection of grades meet virtually every electrical and/or mechanical requirement.

If you are re-designing an old product or planning a new one, send a print or ask for Richardson engineering service. Write —or phone Chicago, MAnsfield 6-8900 . . . no obligation, of course.

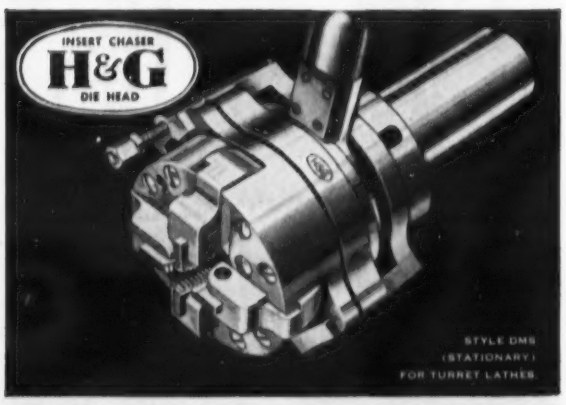
Write to Dept. 21 for Richardson LAMINATE CATALOG.

The RICHARDSON COMPANY

2798 Lake Street, Melrose Park, Ill. • Chicago Phone: MAnsfield 6-8900

▲ For more details circle **NED-697 K7** on enclosed inquiry slip ▲

DESIGNERS: HERE'S NEW DATA ON THREAD CUTTING



STYLE AND SIZES FOR ALL MACHINES ON WHICH THREADS ARE CUT

This die head is unique

THERE IS NO OTHER LIKE IT

It cuts threads with insert chasers. These are, in reality, small sections of the business end of large and expensive chasers, but with this important difference: *their cost is so low they can be even thrown away when dull.* For example, for less than $45 you can get a dozen sets of insert chasers, each set ground ready to go. Change now to insert chaser die heads and watch your performance improve. "UNIFIED AND AMERICAN SCREW THREAD DIGEST" sent free on request.

THE EASTERN MACHINE SCREW CORP.
28-48 Barclay St., New Haven, Conn.

▲ For more details circle **NED-698 K7** on enclosed inquiry slip ▲

RUBBER BATTEN DOORS help confine fumes, odors, noise, withstand bumps from traffic

Smoke, fumes, odors, noise, or conditioned air can be confined by Flexidore all-rubber, double batten doors which are flexible, self-closing, and tear-resistant. Doors can withstand indefinitely the battering of power operated trucks moving in and out of storage areas, and will take repeated abuse from off-center impact and corner cutting of mechanized handling equipment. Made of ¼-in. thick neoprene which has no grain, doors are impervious to grease and oils, and leave no mark on packages or freight.

Doors hang freely from Jamison two-way gravity hinges. Lower half is free-swinging to absorb impact of low freight loads. Reinforced, molded door noses add strength and rigidity, preventing buckling. Shatterproof windows are held by impact-resistant polystyrene retaining rings. Made by **Jamison Cold Storage Door Co.**, Dept. NED, Hagerstown, Md.

▲ For more details circle **NED-699 K7** on enclosed inquiry slip ▲

TAPE PUNCHER & PROGRAMMER converts calculator results into punched paper tape

Calculator results are instantly converted into punched paper tape, ready to be fed into processing machines with tape-reading mechanisms, by this automatic tape punching and programming machine. To speed up operations further, machine has a program board which automatically punches constant data, such as code numbers, into the tape, freeing the operator to do actual calculating.

Machine uses five, six, seven, or eight-channel paper tape and is actuated by a Customatic Comptometer on which operator performs calculations. Instead of writing answer down on paper, operator simply presses a key. This punches, or "reads out," the answer into the tape. The time-consuming key punch operation, necessary to put calculations onto tabulating cards, is eliminated. Calculator can be used independently of the tape-punching unit at any time and can be disconnected for portability. Made by **Comptometer Corp.**, 1721 N. Paulina St., Chicago 22, Ill.

▲ For more details circle **NED-700 K7** on enclosed inquiry slip ▲

New Low-Cost Ways to SAVE YOUR PUMPS

FILTROS "Flo-Clear" LIQUID FILTERS

The complete line of filters for water and many other liquids. New Model C (top left), for "in-the-line" use, may be installed anywhere most convenient. 3 other models are for use at end of supply line—in stream, pool, lake, tanks or solution vats.

In addition to uses with liquids, the "Flo-Clear" filter will remove sediment, oil, moisture and suspended impurities in compressed air and gas lines. Write for free literature.

We can also help you with other filtering problems, with either one of our many standard products, or a new one designed and built to your individual specifications. Write us today.

ENGINEERING, DESIGN Service

FILTROS also Produces Porous Ceramic Media for: AERATION, FILTRATION, DIFFUSION, ELECTROLYSIS, GAS ABSORPTION, CATALYST SUPPORTS, AIR CONVEYOR SYSTEMS.

Consult us about your Needs.

FILTROS INC.

610 West Commercial St.
East Rochester, N.Y.
Manufacturers of Porous Ceramics for Industry since 1913

▲ For more details circle **NED-701 K7** on enclosed inquiry slip ▲

fully PROTECTED? all hands SAFE?

For employee protection and plant safety, GRANET industrial GLOVES give *maximum wear per dollar.* Neoprene, rubber or plastic coated, GRANET gloves are resistant to acids, alkalies, caustics, oils, wet or dry chemicals, abrasive materials, cutting or snagging.

GRANET gloves are made by a super-sensitive automatically controlled process which builds in quality and provides longer wear life. With this *exclusive* process, *high grade* industrial gloves are produced at *competitive prices.*

Shaped fingers and palms for worker comfort, GRANET industrial GLOVES are available full or palm coated and in knitwrist, band top or gauntlet styles. *Stocked* from coast to coast by industrial and safety *distributors* — write for prices and information and name of nearest distributor.

Wear-test a pair of GRANET gloves — write for samples on your company letterhead specifying material to be handled.

GRANET *THE GRANET CORP.*
15 LORING DRIVE, FRAMINGHAM, MASS.

▲ For more details circle **NED-702 K7** on enclosed inquiry slip ▲

WILL STAMPINGS DO YOUR JOB BETTER?

Redesign from casting to stamping cuts piece price 66%...tooling cost 53%

★**BREAKAGE ELIMINATED**—Wrought aluminum alloy gives greater strength characteristics, eliminating breakage which occurred with the original cast part.

★**MACHINING ELIMINATED**—Blanked and pierced part is complete as pictured. No additional machining of holes or top and bottom surfaces is required. End result is a better part at lower cost.

★**COST REDUCED**—Piece price reduced 66%. Original cost of the casting plus necessary machining was $1.45 each in lots of 1000. *Cost of stamping is 50¢ each.*

Tooling cost reduced 53%. Original cost of pattern and drill jig was $301.00. *Tooling for stamping cost $140.00.*

WILL STAMPINGS DO YOUR JOB BETTER?
Analyze your production parts and check with...

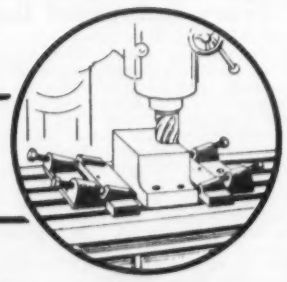
DAYTON ROGERS *Manufacturing Company*
MINNEAPOLIS 7E, MINNESOTA

▲ For more details circle **NED-703 K7** on enclosed inquiry slip ▲

QUICK SURE GRIP

FOR ANY WORK

ON ANY MACHINE TABLE



HART *DIVIDED MACHINE VISE JAWS*

Write for circular

WALTER W. FIELD & SON, INC.
39-51 HAYWARD STREET, CAMBRIDGE 42, MASS.

▲ For more details circle **NED-704 K7** on enclosed inquiry slip ▲

For clean, accurate, dependable heat—
CONVERT TO CHROMALOX
ELECTRIC IMMERSION HEATERS

CHECK THESE 5 BIG FEATURES:

- Portable, screw-plug, flanged types; full range of sizes and ratings
- "Packaged" units—heating element and thermostat in one
- Copper, steel, alloy or lead sheath
- Explosion and moisture-resistant terminal boxes available
- Most sizes ready NOW for immediate shipment

For these applications:
Heating water, oils, Dowtherm, Prestone, tars, greases • Plating, cleaning and pickling solutions • Heating tanks, drums, process kettles • Melting greases, asphalt, other viscous fluids • Super-heating steam, compressed air • Melting lead, solder, babbitt and stereotype metal.

Free Catalog

Write today for Catalog 50. Full details including prices for Chromalox Electric Immersion Heaters and other units that provide the electrical answer to many more heating problems.

Edwin L. Wiegand Company
7509 Thomas Boulevard, Pittsburgh 8, Pa.
G-2102
See ad on Page 4.

For more details circle NED-705 K7 on enclosed inquiry slip

Let This Handy
Data-Packed Catalog
Be YOUR
POWER TRANSMISSION
Guide!

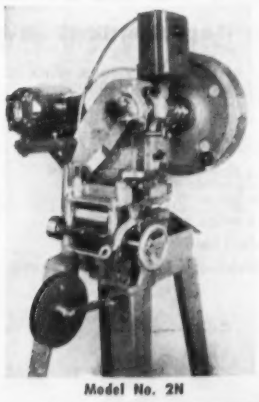
Flexible Couplings
•
Variable Speed Pulleys
•
Variable Speed Transmissions
•
Universal Joints
•
Adjustable Motor Bases
•
Concise information on the complete Lovejoy line

GET YOUR COPY NOW!
REQUEST BULLETIN No. 1200

LOVEJOY FLEXIBLE COUPLING CO.
4803 WEST LAKE STREET, CHICAGO 44, ILLINOIS

For more details circle NED-706 K7 on enclosed inquiry slip

TAG EMBOSSER
(AUTOMATIC)



Strip metal tags, labels, number plates are embossed with numbers, letters and emblems in this automatic machine.

Works from a coil of aluminum, brass, copper or other metal, embossing a tag, punching holes and cutting off rounded or square ends at rate of 7000 tags per hour continuous.

Model No. 2N

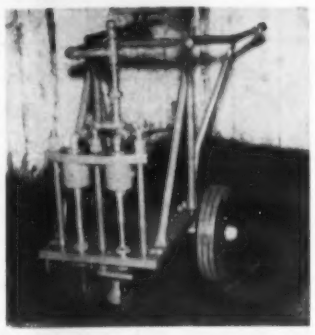
Dozens in use by government for producing parachute tags. Widely used by industry for tag making. Comes complete with male and female type. Fully adjustable. "Pushbutton" controls. Originated by us more than 20 years ago.

Write For Model 2N Tag Embossing Bulletin, Agents in Most Areas.

ACROMARK
THE ACROMARK COMPANY
7-11 MORRELL ST., ELIZABETH, NEW JERSEY
"The Original Marking Specialists"

For more details circle NED-707 K7 on enclosed inquiry slip

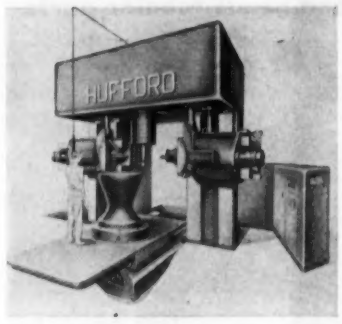
CONCRETE SURFACE CHIPPER prepares a good bonding surface



Cement, concrete or stone floors and walks can be surface-prepared for bonding or to achieve a nonslip surface with this portable resurfacer. Two pneumatically - operated heads with accessory four-point tools will remove portions of old material to prepare a bonding surface. The accessory bush chisel will scuff up an area to make it slipproof. Unit requires minimum of 60 cfm of air at 80 psi. Tool retainer is air actuated by two-way valve. Made by **Bicknell Mfg. Co.**, 1 Lime St., Rockland, Maine.

For more details circle NED-708 K7 on enclosed inquiry slip

SPINNING-FORGING MACHINE forms parabolic, hemispherical, or conical shapes from one piece



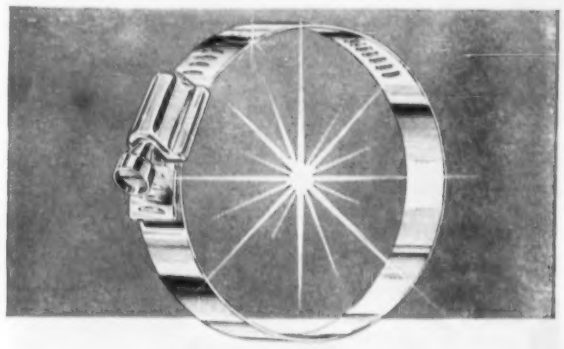
Features of a vertical spinning lathe are combined with a process for forging the wall thickness of sheet parts in this Spin-Forge. Machine will form parabolic, hemispherical, conical, hour-glass and other shapes from a single piece. Force used for spinning and forging is applied by two opposed rollers, hydraulically actuated. Rollers feed vertically down the form, longitudinally into die contours, and, being mounted on angular-tilting heads, can follow all contours, maintaining a right angle contact with the work surface. Travel of rollers is tracer controlled, following templates automatically.

The die, with contour of finished part, is mounted on rotating table having up to 400-rpm spindle speeds. Table and spindle are carried on slide which moves outwardly from forming position for loading and removal of parts. Spindle is driven by 200-hp motor, whereas the 225,000-lb forming force is supplied to each roll by hydraulic cylinders operating at 3000 psi. Feed rate is 60 ipm.

System includes a closed TV circuit with two Hallamore cameras and screens for close-up view from remote location. Other circuits provide for programming the forming operations. Original machine handles 60 x 60 in. parts, reducing type 321 stainless steel from 1 in. thickness to ½-in. in a single pass. Made by **Hufford Corp.**, 1701 E. Grand Ave., El Segundo, Calif.

For more details circle NED-709 K7 on enclosed inquiry slip

For more details circle NED-710 K7 on enclosed inquiry slip



Aero-Seal
THE STAR OF HOSE CLAMPS

In hose clamps, the *quality* name today as always is AERO-SEAL. We pioneered the famous precision worm gear and engineered the *extra strength* and holding power. Other clamps may LOOK like AERO-SEALS, but take a *second* look! Compare quality with price cuts and special discounts. Which pays off best? Compare the worm gear construction. Note that AERO-SEAL worms don't wobble. Look at the special rugged interlocking feature that makes AERO-SEALS hold tight — no spot welding. Note the precision gear that applies uniform pressure — does not pinch hose. Stainless steel bands, complete size range for dozens of fastening uses. Insist on genuine AERO-SEALS.

For added quick-attach advantage, get AERO-SEAL Jets. Nothing like them!

Aero-Seal REGULAR WORM GEAR HOSE CLAMPS
BREEZE CORPORATIONS INC. 700 Liberty Ave., Union, N.J.

For more details circle NED-711 K7 on enclosed inquiry slip

How Alcoa Aluminum Fasteners make good furniture even better

With your good name riding on every aluminum chair, chaise and settee, it pays to assemble with Alcoa® Aluminum Fasteners. You get perfect color match and lasting good looks with absolute protection against both galvanic and atmospheric corrosion. Your local Alcoa distributor has a complete stock of aluminum fasteners to meet your every need. He is listed in the Yellow Pages of your telephone directory.

ALCOA ALUMINUM FASTENERS

NEW! "ALCOA THEATRE" Exciting Adventure Alternate Monday Evenings

Your Guide to the Best in Aluminum Value

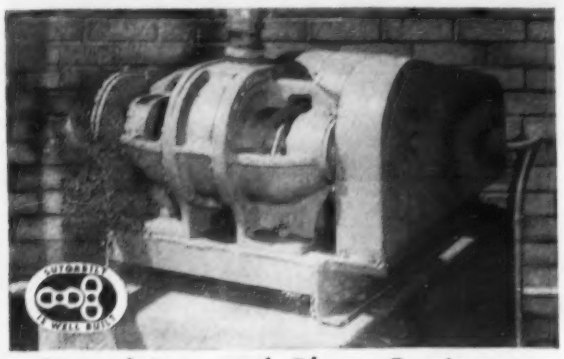
Fill out coupon for facts, samples

Aluminum Company of America
2245-K Alcoa Bldg., Pittsburgh 19, Pa.

Gentlemen: Please send complete specification data and samples of Alcoa Aluminum Fasteners.

Name _____
Title _____
Company _____
Address _____

For more details circle NED-712 K7 on enclosed inquiry slip



Consulting and Plant Engineers look to SUTORBILT

...for solutions to air and gas handling problems

A 5HXB vacuum pump at the Sunnyvale, California, Sewage Treatment Plant is typical of many in use today. It is used to handle sewer gas from the gasometer at the Waukesha engines.

Sutorbilt is ready to put more than 26 years of experience in manufacturing rotary positive blowers, gas pumps, and vacuum pumps to work for you. Standard units are available in capacities up to 30,000 CFM and pressures or vacuums up to 12 psig. (S-7 4266)

Write for the name of the representative nearest you, or check the yellow pages of your local telephone directory.

SUTORBILT CORPORATION
SUBSIDIARY OF FULLER COMPANY • CATASAUQUA, PA.
5200 E. 60 St. P.O. Box 269 • Maywood, Calif.

For more details circle NED-726 K7 on enclosed inquiry slip

with a

DI-ACRO*ROD PARTER

Make several thousand burr-free cuts per hour in bar stock

Combination shearing-breaking action parts bar stock without burring and minimum distortion. Handles up to ⅜" round bar stock—square, rectangular, and hex shaped bar stock can be parted when machine is equipped with special die heads.

Material range is from hot rolled bar stock to stainless steel and other high alloy materials. The harder the material is the better it parts.

Long lasting die heads can be reversed before resharpening—can be sharpened many times. Standard cutting heads in No. 2 and power models have 10 graduated holes from 1/16" to ⅜"; No. 1 Model has eleven holes. Optional die heads for parting scaly hot rolled bar stock *at no extra charge.*

Speed-Matic Gauge, an accessory on power model, enables machine to part off several thousand short pieces an hour. *Send us samples for test cutting or consult the Yellow Pages of your phone book for the nearest Di-Acro distributor.*

Hand operated model also handles up to ⅜" rods.

Di-Acro Power Parter with stock stand and Speed-Matic Gauge.

This ½" stainless steel bar stock has been "parted" in a Di-Acro Rod Parter. Shiny edges show where rod was sheared, then fractured or "parted off." Will clear hole its own diameter.

di-acro PRECISION METALWORKING MACHINES

*pronounced die-ack-ro

O'NEIL-IRWIN MFG. CO.
854 8th Avenue—Lake City, Minn.

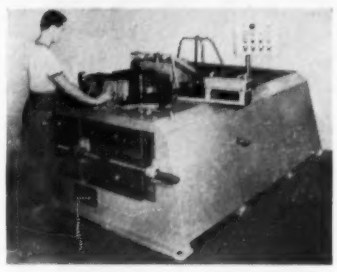
For more details circle NED-727 K7 on enclosed inquiry slip

FLAME ARRESTORS for explosionproof venting service

Twelve Honey Comb flame arrestors have been added to company's line and are offered in various sizes and shapes for venting totally enclosed electrical equipment in hazardous locations. Units allow explosion-proof motors to be internally cooled by air drawn through several arrestors mounted in one end of motor housing and expelling it through several units in the other end. They can also be used to explosion-proof submersed gasoline pumps and similar equipment. Flame path openings of 0.006 to 0.250 in. and flame path lengths up to 6 in. are available, with diameters starting at 0.312 in. Made by **G. W. Lisk Co.**, 20 South St., Clifton Springs, N. Y.

For more details circle NED-728 K7 on enclosed inquiry slip

PUNCH PRESS & BENDER pierces, flattens, coins weld projections and bends tubular parts



Hydraulically powered combination horizontal punch press and multiple bending machine simultaneously pierces and countersinks holes, flattens, coins weld projections, and produces multiple bends in two tubular parts. Net production is 1440 pieces per hour. The fully automated machine adapts to production of tubular furniture, automotive and aircraft molding and trim, and handles angle, square, or rectangular-section shapes. Machine cycle is 5 seconds.

Wing dies on the machine can be reversed in both position and action to form S-shaped sections. Bed construction allows addition of hydraulic cylinders for forming, piercing, flattening, and cutoff after bending is done. Machine can be manually controlled for varying production requirements. Pushbutton panel includes controls for single and automatic cycle, as well as controls for inching each machine function. All controls are interlocked to prevent machine or die damage. Made by **Walter P. Hill, Inc.**, Dept. 1, 22183 Telegraph Rd., Detroit 19, Mich.

For more details circle NED-729 K7 on enclosed inquiry slip

Flow Measuring Instruments

Brooks Rotameter Co.—Full-View rotameters for flow measurement and control are subject of illustrated bulletin 115. General-purpose meters are stocked in ½ to 2-in. pipe sizes, as are low flow rate and high pressure meters.

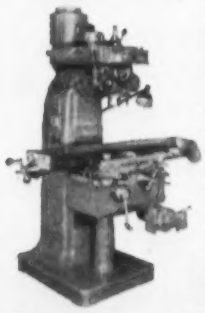
For more details circle NED-730 K7 on enclosed inquiry slip

Produce MORE... Produce it BETTER!

ON THESE IMPROVED ECONOMICAL

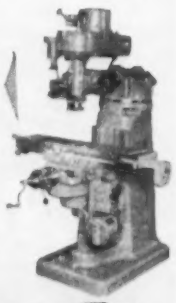
INDEX VERTICAL MILLS

Super "55" MILL



1½ HP Head or optional 2 HP with continuous duty motor gives 50% or more capacity . . . More rigidity, more accuracy . . . Increased horse power and dynamically balanced Cast Iron Pulleys and Drive System afford improved production capacity . . . More weight in the column, heavier ribbed column, heavier knee, heavier saddle.

"45" MILL



Unique square design of overarm affords more rigidity, greater accuracy . . . Provides extra range and capacity . . . More power at the cutter. No adjustment required on overarm and head after use . . . No need to re-indicate head after moving overarm . . . Speed range with nine changes makes possible the use of high speed or carbide tipped cutters to best advantage.

INDEX MACHINE CO.
539 N. MECHANIC STREET JACKSON, MICHIGAN

For more details circle NED-731 K7 on enclosed inquiry slip

SPECIFY GRIPCO LOCK NUTS

to resist stress, wear and vibration

They increase product durability at low initial cost

Simple one piece design—no inserts—no separate locking devices. Nothing complicated—the Gripco locking action is within the nut itself, yet you get low initial cost and low application cost with increased customer satisfaction. Speed production and lower manufacturing costs on your products now.

Send for samples and NEW CATALOG today.

Gripco Products Include:

Centerlock Nuts • Gripco "Clinch Nuts" Gripco Hi-Nuts • Gripco Pilot-Projection and Countersunk Weld Nuts • Miniature Clinch and Weld Nuts

all with or without the famous Gripco positive locking feature. Also Standard-Semi-Finish Nuts.

Large inventories of all products carried for immediate shipment

115

GRIP NUT COMPANY
106 Maple Ave. • South Whitley, Ind.

For more details circle NED-732 K7 on enclosed inquiry slip

EXPLOSION PROOF SOLENOIDS AND SOLENOID OPERATORS

FX-326 SOLENOID
FX-300 LINE
EXPLOSION PROOF SOLENOIDS

R2DX-326
RDX-300 LINE

The FX-300 explosion proof solenoids and the RDX-300 explosion proof solenoid operators have a variable stroke. For the standard models at minimum stroke, the capacity at 85% voltage ranges from 8 lbs. at 0.47" stroke to 300 lbs. at 1.67" stroke. At maximum stroke, the capacity ranges from 3 lbs. at 1.25" stroke to 100 lbs. at 5" stroke.

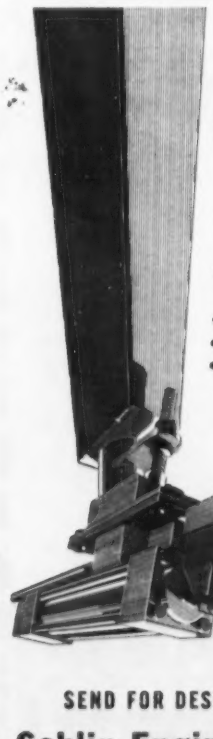
By the use of external levers longer than the standard ones, the maximum stroke can be increased with corresponding decrease in pull.

For external levers twice as long as the standard ones, the capacity at maximum stroke ranges from 1.5 lbs. at 2.5" to 50 lbs. at 10". Other combinations are possible.

Ask for Bulletins EE-191 and EE-193 or our complete catalog. See our catalog in Sweet's Catalog Service. There is a Trombetta solenoid for every imaginable requirement.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE ST. • MILWAUKEE, WIS.

For more details circle NED-733 K7 on enclosed inquiry slip



NEW DESIGN

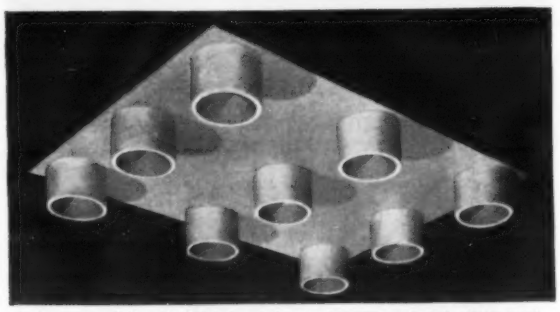
Sahlin Replacement Jaws

- Smaller area jaw has greater gripping force; tough steel inserts are easily replaced.
- Heavy duty bore easily substituted for standard 2" bore—gives up to 40% more gripping force.
- All parts jig-milled to make them interchangeable; all fasteners tool crib items.
- New jaws weigh 8 - 10 lbs. less.
- Off-the-shelf Deliveries.
- Special jaws—special features available.

SEND FOR DESIGN DATA

Sahlin Engineering Co., Inc.
Birmingham, Michigan

For more details circle NED-734 K7 on enclosed inquiry slip



Bottom view of Signode "Chuckaway" pallet showing patented tubular posts.

New... improved... expendable

Low Cost Signode Chuckaway pallets are low in first cost; eliminate maintenance costs, save storage space.

Light weight Cut shipping costs every mile, every load. Easy and clean to handle.

Strong Rugged construction proved in use and in famous Signode testing laboratory.

Versatile Standard or special sizes. Post placement variable. Tray or flat tops.

Expendable No returns, so no shipping or record-keeping or storage costs on returns.

Competent Signode assistance on expendable pallet design and unitizing methods is available. For information and Signode Chuckaway pallet details, write:

SIGNODE STEEL STRAPPING CO.
Dept. SP, 2643 N. Western Avenue, Chicago 47, Illinois
Offices coast to coast.
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

▲ For more details circle NED-735 K7 on enclosed inquiry slip ▲

Cut inventory, maintenance, vibration, with Veelos, the adjustable V-belt!

Four 100' reels of Veelos (O, A, B, C widths) meet every V-belt need up to 316 sizes . . . store in *inches of space!*

CUT DOWN-TIME! Veelos is adjustable—no need to tear down outboard bearings, reset, tilt or move motors to make belt replacement or repairs. Tighten or change your Veelos belt by adding or removing links. No more waiting for a new belt, or new matched set when a belt gets loose!

CUT VIBRATION! Install Veelos in place of ordinary endless belts. Your Veelos salesman can prove, with the amazing Veelos Vibration Analyzer, that Veelos cuts vibration up to 90%!

Write for FREE Veelos Data Book to: MANHEIM MANUFACTURING & BELTING CO.
705 Stiegel St.
Manheim, Pa.

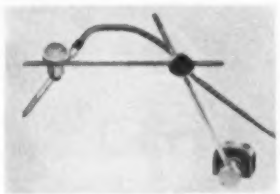
VEELOS THE BALANCED LINK V-BELT

Veelos is known as Veelink outside U.S.A.

©MMB CO. 1956

▲ For more details circle NED-736 K7 on enclosed inquiry slip ▲

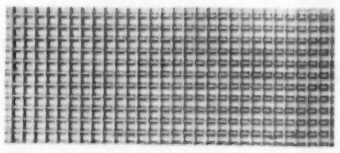
FLEXIBLE NOZZLE HOLDER simplifies mist cooling setup



Used with Mistic Mist generators, this flexible nozzle holder allows cooling mist to be directed where it is needed on any production job. Friction-type universal joints facilitate exact positioning and resetting. Holder assembly has a detachable plastic covered magnet with 60-lb pull for temporary setups. Removal of magnet allows use of either Bridgeport assembly or the stud mounting assembly for permanent attachment. Holder adapts to multiple nozzle units with additional universal joints. Made by **Aetna Mfg. Co.**, Dept. ND, 188 S. York St., Bensenville, Ill.

▲ For more details circle NED-738 K7 on enclosed inquiry slip ▲

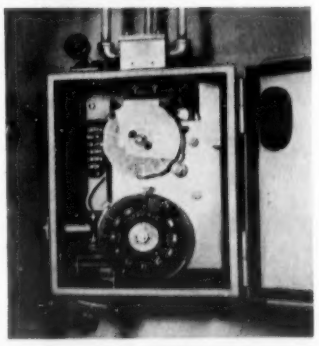
PRISMATIC LIGHT SHIELD molded of polystyrene or acrylic



Intended for general illumination purposes, this Prismoid-Gratelite light shield is 86.1 per cent efficient, yet provides 45 x 45-degree lamp shielding. Panels are injected molded from either polystyrene or acrylic plastic in 11 x 48 or 16 x 48-in. sizes. Intersecting prismatic elements of clear refractive plastic, formed around truncated pyramidal apertures give a kaleidoscopic panorama of constantly changing light patterns when panel is viewed from different angles. Being open like a louver, free movement of air helps keep panels clean. Made by **Edwin F. Guth Co.**, 2603 Washington Ave., St. Louis 3, Mo.

▲ For more details circle NED-739 K7 on enclosed inquiry slip ▲

TIMING DEVICE controls cyclical operations



Features of cam timer and interval timer are combined in this integral button controller, designed for control of operations related to the compression molding industries. Basic model IBC-2 unit can serve many flexible cycle control applications without use of relays. It is said to bridge the area where a plain interval timer or single cam timer suffices and the area requiring equipment for handling a high degree of cycle complexity. Made by **Seely Instrument Co.**, 378 Fourth St., Niagara Falls, N. Y.

▲ For more details circle NED-740 K7 on enclosed inquiry slip ▲

HEAVY PLATE FORMING FASTER with STEELWELDS

Because of simplicity of operation, heavy steel parts can be turned out quickly and accurately on Steelweld Bending Presses. Their heavy quality construction, including solid one-piece frame, finest electrical equipment and automatic oilers for lubrication of all bearings, keep Steelweld Press maintenance extremely low and assure uninterrupted production.

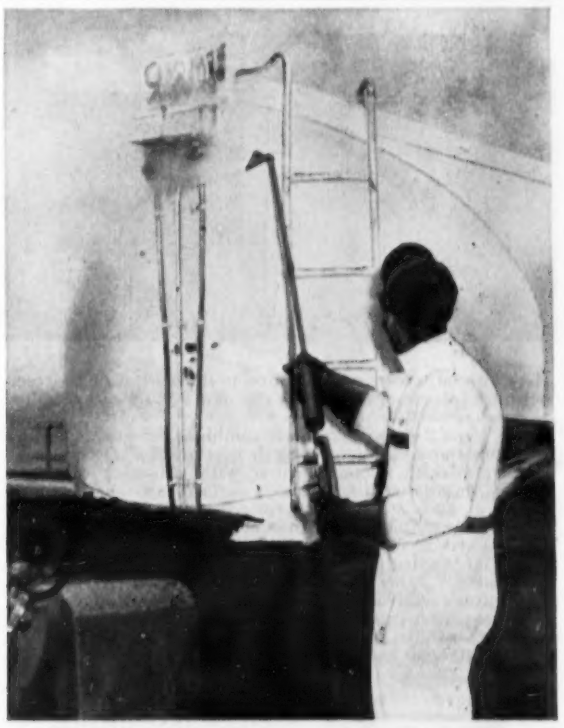
STEELWELD BENDING PRESSES CATALOG No. 2010

Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6654 East 281st St., Wickliffe, O.

STEELWELD PRESSES

▲ For more details circle NED-741 K7 on enclosed inquiry slip ▲



EDMONT CASE NO. 614: For wet vapor blast cleaning of transportation equipment, special knurled-grip rubber gloves costing $60 a dozen wore 8 shifts. Edmont recommended a Durox reinforced plastic coated glove (No. 364 Grappler) which gave equal wear for 70% less money.

Edmonts cut glove costs 70%

No. 364 Grappler 14" fully coated gauntlet

In case above, the Edmont-recommended glove cut glove costs from 62½¢ to 18¢ per shift because it fit the job. Its special plastic coating has outstanding non-slip wet grip, and excellent resistance to snagging, abrasion, acids, caustics and many solvents. Exclusive wing thumb, curved finger pattern assists dexterity, reduces hand fatigue.

Free Test Offer to Listed Firms:
Describe your operation, materials handled, temperature condition. We will recommend the correct glove for your job, from over 50 Edmont types, and supply samples for on-the-job comparison testing.

Edmont Manufacturing Company
1240 Walnut Street, Coshocton, Ohio
In Canada write MSA, Toronto

Edmont

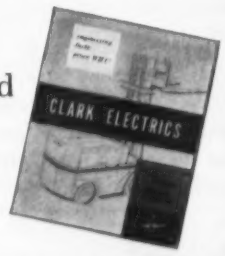
Edmont JOB-FITTED GLOVES

▲ For more details circle NED-742 K7 on enclosed inquiry slip ▲

YOU GET MORE TON-MILES PER BATTERY CHARGE

A new free booklet gives engineering facts that prove why CLARK ELECTRICS are the most efficient trucks on the market.

Simply circle the reader service card for your copy.



CLARK EQUIPMENT
Industrial Truck Division
CLARK EQUIPMENT COMPANY
BATTLE CREEK 21, MICHIGAN

▲ For more details circle NED-737 K7 on enclosed inquiry slip ▲

NEW CASTER WHEEL IS 50% STRONGER!

Bassick's new "Atlasite" composition wheel for truck casters carries heavy loads as easily as metal wheels—yet is far kinder to floors.

The new all molded composition "Atlasite" developed by Firestone has 50% more impact strength than previous models. It wears without wearing out and is far quieter than metal wheels. Also, its non-marking composition virtually ends the danger of black tracks or smudges on floors. Order from your industrial distributor or write: 7.37

THE BASSICK COMPANY
BRIDGEPORT 5, CONN.
IN CANADA:
BELLEVILLE, ONT.

Bassick — SYMBOL OF EXCELLENCE — STEWART SW WARNER

For more details circle NED-743 K7 on enclosed inquiry slip

Here's an important new addition to the field of surface temperature instrumentation. It's the new Alnor wall-mounted pyrometer with flexible arm.

The Type R-4200 Pyrometer combines the convenience of a portable and the instrument protection of a wall-mounted unit. It enables a manufacturer with a battery of ovens, platens, molds, etc., to locate a surface instrument permanently at each station for production checking of surface temperatures. Quickly and inexpensively attached to instrument board or any wall surface.

Available with flexible arm and choice of ten thermocouples in standard Fahrenheit ranges from 0-400° to 0-2000°. Centrigrade equivalents and special ranges, including below zero temperatures, also available.

Write for Bulletin 2569. Illinois Testing Laboratories, Inc., Room 529, 420 No. LaSalle St., Chicago 10, Illinois.

Alnor — PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-744 K7 on enclosed inquiry slip

REVIVE OLD STIFFS!

. . . easier, faster, economically

- cleans hardened brushes thoroughly
- restores bristles to natural flexibility
- won't evaporate
- non-inflammable
- safe for finest bristles
- use it over and over again

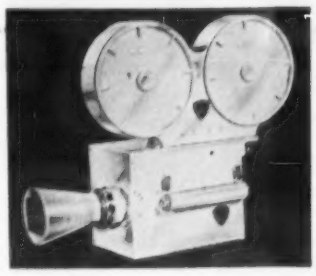
Don't throw old brushes away — use Cabot's Brush Cleaner first . . . it's your best solution!

Write for free sample

SAMUEL CABOT INC.
1032 Oliver Building, Boston 9, Massachusetts
Please send sample of Cabot's Brush Cleaner

For more details circle NED-745 K7 on enclosed inquiry slip

HIGH SPEED CAMERA
speed up to 2800 frames per second

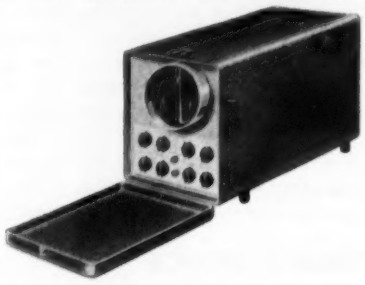


Various phenomena of very short duration can be analyzed by the Photo-Sonics 4B motion picture camera which operates at speeds up to 2800 frames per second. It has both rotating prism and rotating disk shutter, the former allowing continuous film flow while compensating for image distortion. The rotating disk shutter provides exposure control and is interchangeable, with openings from 5 to 60 degrees available. Removable film chamber has a 500-ft capacity. A two-light timer and fiducial markers assist in data reduction. Lenses in sizes from 80 to 550 mm and longer are available. Distributed by **Gordon Enterprises,** 5362 N. Cahuenga Blvd., North Hollywood, Calif.

For more details circle NED-746 K7 on enclosed inquiry slip

ENGINE ANALYZER
tests battery or magneto systems

Visual picture of the complete ignition cycle in the exact sequence in which it occurs is provided by the Anal-O-Scope electronic gasoline engine analyzer. Either battery or magneto-operated systems can be tested. Cathode tube equipped tester is operated by 110 v or from the vehicle battery without a power pack. Capable of testing 6, 12, or 24-v systems, it shows firing cycle of any single cylinder; all 4, 6, or 8 cylinders; or parades one after the other. Effects of compression, temperature, and carburetion can be observed. Analysis of dwell or cam angle, distributor wear, condenser action, primary circuit leakage, valve action, and other operating details of an engine can be obtained. Portable unit is offered with power timing light and set of spark plug adaptors. Made by **Snap-On Tools Corp.,** Dept. NED, 8028 28th Ave., Kenosha, Wis.

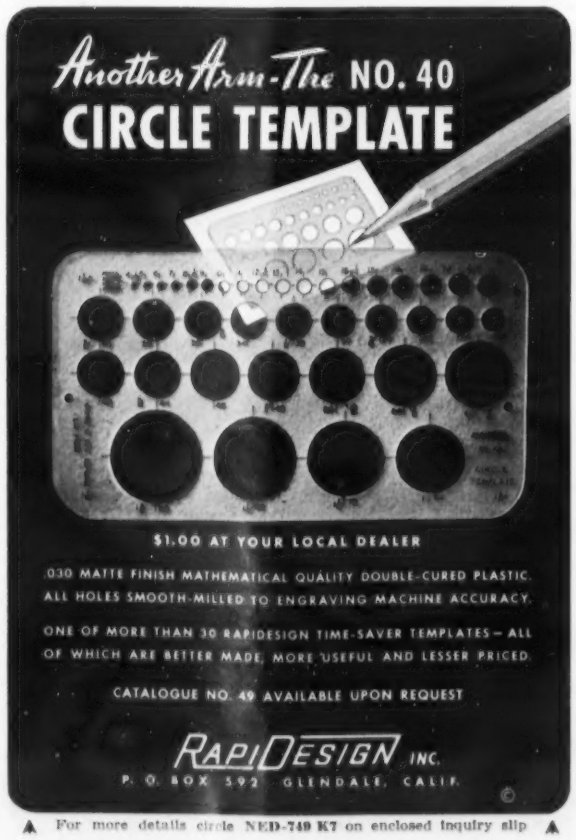


For more details circle NED-747 K7 on enclosed inquiry slip

Small Motors & Drives

Bodine Electric Co.—265 standard stock reducer and nonreducer motors are described in 12-page bulletin S. Ratings of nonreducer motors range from 1/7 to 1/1500 hp. Reducer motors, with speeds ranging from 833 to 0.7 rpm, have torques of 12.8 oz-in. to 219 lb-ft.

For more details circle NED-748 K7 on enclosed inquiry slip



For more details circle NED-749 K7 on enclosed inquiry slip

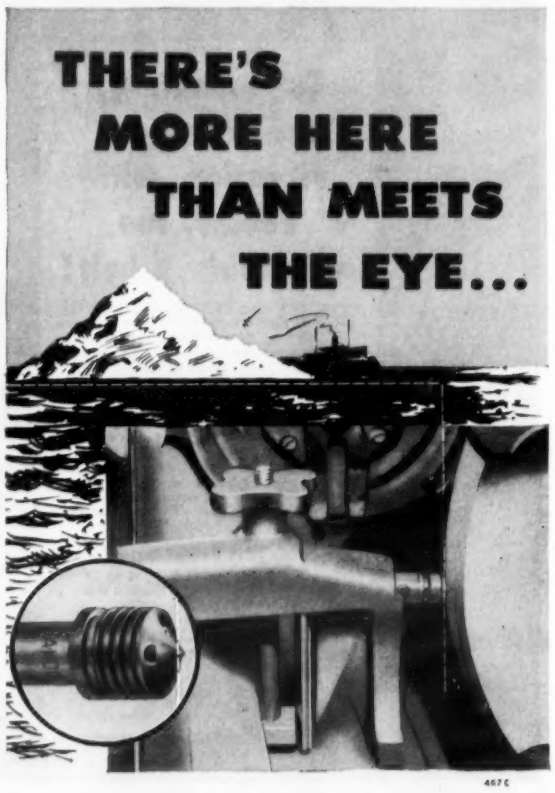
Hand Trucks

Speed short-distance hauling of heavy loads with Yale Hand Trucks. Easy to handle, these Yale Trucks minimize pulling effort. Their compact design provides maximum maneuverability in narrow aisles, crammed storage areas. Smooth lifting and lowering action protects fragile loads.

Yale Hand Trucks are available in capacities from 1,000 to 12,000 lbs. with mechanical or hydraulic lift. Write The Yale & Towne Mfg. Co., Philadelphia 15, Pa., Dept. A-3710.

YALE* INDUSTRIAL LIFT TRUCKS AND HOISTS
*REG. U. S. PAT. OFF.

For more details circle NED-750 K7 on enclosed inquiry slip



In an iceberg or in a J. K. Smit Diamond Tool only a fraction shows above the surface.

Everyone knows about the unseen portion of an arctic iceberg. Many do not realize the unseen factors that lie beneath the surface of a J. K. Smit Diamond Tool, such as . . . our constant research to find still better methods of manufacturing Diamond Tools, the unquestioned integrity of our company since 1888, the manufacturing skills that have been learned and passed on through all those years, and quality control of manufacture for tool duplication.

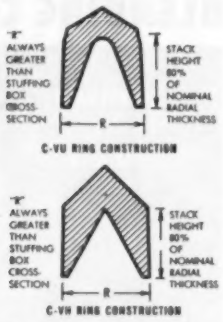
All these hidden assets count much toward maintaining our position as a leader in the industry today.

When *your* next job specifies a diamond tool for any purpose contact J. K. Smit. Our field representatives are trained and qualified to assist you with any standard or special application.

J. K. SMIT & SONS, INC.
HOME OFFICE AND PLANT
MURRAY HILL NEW JERSEY

For more details circle NED-751 K7 on enclosed inquiry slip

Industry's Most Universal Packing



John Crane®

CHEMLON®

C-V RINGS

Countless applications prove that "John Crane" C-V Rings are the closest approach to a universal packing for valves, pumps, mixers, hydraulic cylinders and like equipment. They effectively handle all industrial acids, alkalis, solvents, organic and hydraulic fluids. Coefficient of friction is extremely low. "Breakout" friction is only slightly higher than running friction.

C-VU RINGS for low pressure service—such as control and regulator valves handling gases and fluids, where it is necessary to have a very sensitive and resilient type packing.

C-VH RINGS for high pressure service—for use in pumps, hydraulic cylinders and like services at pressures to 500 psi. and over. Constructed with a heavy wall heel to withstand pressure requirements, C-VH Rings are designed to provide voids between rings, so that as the Teflon expands due to heat, this take-up room minimizes any excess friction in the stuffing box.

"John Crane" C-V Rings are available in full line of standard sizes and male and female adaptors. Sizes can be molded to stuffing box specifications... Request Bulletin P-325.

Crane Packing Co., 6411 Oakton St., Morton Grove, Ill. (Chicago Suburb). In Canada: Crane Packing Co., Ltd., Hamilton, Ont. *Chemlon—the best in DuPont Teflon

CRANE PACKING COMPANY

▲ For more details circle NED-752 K7 on enclosed inquiry slip ▲

FREE SAMPLE!

FLEXIBLE, LIQUID-TIGHT CONDUIT OUTLASTS ORDINARY METAL CONDUITS

Sealtite* flexible, liquid-tight electrical conduit is rapidly replacing rigid conduit in many plants for certain installations. It's easier, less costly to install (especially in cramped spaces) and actually outlasts ordinary metal conduits in moist or corrosive atmospheres. A tough, extruded polyvinyl jacket seals out water, dust and corrosive fumes . . . protects wiring from weather, oil and chemicals. Sealtite can be installed indoors or out; is ideal where conduit must flex or be moved, absorb vibration or meet misaligned outlets. Write for free sample and Booklet S-537 giving full information. Address: *The American Brass Company, American Metal Hose Division, Waterbury 20, Conn.*

*Trademark 57197

SEALTITE flexible, liquid-tight conduit . . . AN ANACONDA® PRODUCT

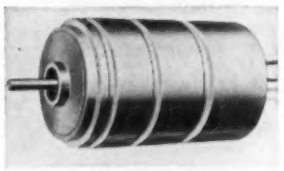
▲ For more details circle NED-753 K7 on enclosed inquiry slip ▲

TIME DELAY SWITCH
in 5 to 20-sec to 1 to 5-min ranges

Line of time delay switches affords standard delay ranges of 5 to 20 seconds, 15 seconds to 2 minutes, and 1 to 5 minutes. Switches are generally used in conjunction with magnetic relays and operate thermally. Delay can be set at any point within range by means of an adjustment screw that varies the contact gap. Switch is offered in a recycling type which has two sets of contacts, one normally-open and one normally-closed. Standard type has one set of contacts, either open or closed. Contacts are rated 1 or 2 amp at 115 ac. Temperature compensating versions are also offered for uses where an accurate delay is required over widely varying ambient conditions. Made by **Betts & Betts Corp.**, Dept. N, 213 W. 14th St., New York 11, N. Y.

▲ For more details circle NED-755 K7 on enclosed inquiry slip ▲

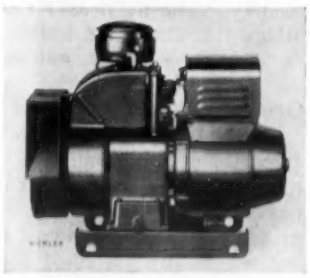
CONTROL MOTOR
magnetic clutch indexes its shaft



Rotation of potentiometers, counters, rotary switches, and control mechanisms is among uses for the Syncramental bi-directional stepping motor which translates pulses to incremental shaft positions. A magnetic clutch is used to index the shaft. Clutch and detent mechanism are mounted between two Ledex rotary solenoids which cause shaft rotation. Load capacity up to 2 lb-in. starting torque at 20° C is provided. Motor is 1.500 x 2.525 in. and weighs 13 oz. Made by **G. H. Leland, Inc.**, 146 Webster St., Dayton 2, Ohio.

▲ For more details circle NED-756 K7 on enclosed inquiry slip ▲

ELECTRIC POWER PLANT
operates in confined indoor space



Installation of model 3.5RM21, 3500-w, 115-v ac remote control electric plant in a confined indoor space is made possible by its reverse cooling system. This system takes air from room, circulates it through the plant and expels the heated air to the outside through a single vent. Generator is operated by one-cylinder air-cooled engine. Other sizes for stand-by protection are rated 5, 10, 15, 35, and 50 kw. Made by **Kohler Co.**, Dept. 2, Kohler, Wis.

▲ For more details circle NED-757 K7 on enclosed inquiry slip ▲

POTDEVIN CAN SOLVE YOUR SPECIAL GLUING or COATING PROBLEM

Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We'll be happy to submit recommendation.

If your problem is high speed coating of paint, varnish, glue, latex, etc. — POTDEVIN's sixty years of specialization in coating equipment can quickly help you solve it . . . guaranteeing initial low cost and top efficiency. Illustrated is just one of hundreds of special machines. It laminates rolls of materials up to 20" wide at speeds up to 50 feet per minute.

ESTABLISHED IN 1893 POTDEVIN

POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

▲ For more details circle NED-758 K7 on enclosed inquiry slip ▲

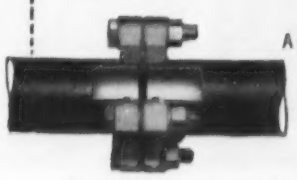
NOW YOU CAN

CARRY A SPARE...
for rubber lined piping systems

Rubber lined piping has more than proven its superiority in thousands of anti corrosion and anti abrasive applications. However, as in any piping system, occasional repairs are necessary.

Heretofore, these repairs meant shutting down the line, sending detailed drawings for new pipe and an indefinite period of waiting during which both production output and financial income suffered.

Now, with the La Favorite "Fieldlink"® method of joining rubber lined pipe, the ailing section, whether it be a single section, or hundreds of feet, can be easily replaced without so much as the loss of a days production.



A pressure proof connection can be effected in only 2 minutes the Fieldlink way.

Prepared pipe and fittings are available from stock in 20 foot lengths. Additional lengths can be quickly prepared at your own plant by any pipe fitter, on any standard pipe machine.

(If required, grooving and counterboring tools can be obtained from La Favorite)

LA FAVORITE *Rubber Mfg. Co.*

273 Wagaraw Road • Hawthorne, New Jersey

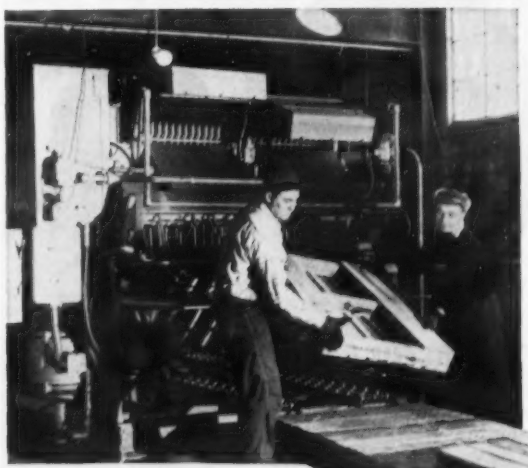
Yes, I want to know more about the Fieldlink method of joining rubber lined pipe in my own plant. CLIP THIS COUPON FOR A BIG DIVIDEND

☐ Send me descriptive bulletin 2958 ☐ Send a representative to explain in person

NAME..... POSITION.....
COMPANY..... ADDRESS.....
CITY..... STATE.....

▲ For more details circle NED-759 K7 on enclosed inquiry slip ▲

FMC STOPPED HAND HAMMERING—STARTED MACHINE NAILING at BETTER BUILT WOOD PRODUCTS



HOW *an automatic* FMC HARDWOOD NAILING MACHINE

eliminates Hardwood Splitting, provides Uniformly Nailed Square Pallets, produces Regular and Rush Orders on Time.

DELMER LaCOUNT, President of Better Built Wood Products, says his FMC nailing machine and a few men turn out a couple of truckloads of hardwood pallets a day. Hand-nailing is "out" in his plant; an FMC automatic nailer has taken over to 1) increase sales, 2) speed up operations, 3) increase volume, 4) turn out a better product and 5) cut costs and accidents. Labor relations are better too; men feed the machine instead of swinging hammers!

Why don't you substitute the automation of an FMC hardwood nailer for hand-nailing? As LaCount says: *"We've had no mechanical failures."* You'll build a better product and bigger sales when you automatically nail with an FMC hardwood nailing machine. *Request bulletin today!*

Located at Auston, Wisconsin, Better Built is using a Series 401.000 hardwood nailer for better pallet quality, higher production rates and happier employees.

FOOD MACHINERY AND CHEMICAL CORPORATION
NAILING MACHINERY SECTION
RIVERSIDE, CALIFORNIA

Please send full details about the Series 401.000 Hardwood Nailer.

Name_____
Company_____
Address_____
City_____ State_____

▲ For more details circle NED-754 K7 on enclosed inquiry slip ▲

METZGAR "NYLO-" CONVEYORS Resist Corrosion

-wheel • -gravity roller • -live roller

ALL WEATHER GUARANTEE

Made with NYLON wheels and bearings and with galvanized steel rollers with NYLON bearings. Steel or aluminum frames.

EFFICIENT FOR: Wet conditions, Salt, Abrasives, Fruit and Dairy Acids, many Industrial Acids.

Temperatures from 150° F. to -10° F.

MANY APPLICATIONS — Ask our engineers to show you how "NYLO" Conveyors can serve you best. Explain your requirements.

NEEDS NO LUBRICATION

METZGAR CONVEYOR CO.

416 Douglas N.W.

MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES

GRAND RAPIDS 4, MICH.

For more details circle NED-760 K7 on enclosed inquiry slip

for production brazing...

LUCAS MILHAUPT SILVER BRAZING PREFORMS

RINGS

Round Wire, Machine Wound, Mandrel Wound.

ODD SHAPES

Any size or form.

WASHERS

Edgewound and Blanked.

Preforms in any size or shape that.

1. End Wasted Time In Placing Silver Solder in position for brazing.
2. Speed Assembly Work.
3. Eliminate Rejects.
4. Meter Silver Solder to Flow In and Around Joints.

FREE 16 page booklet gives you all the facts on better brazing with preforms. Write Today!

LUCAS MILHAUPT Engineering COMPANY

5070 So. Lake Drive, Cudahy, Wis.

For more details circle NED-761 K7 on enclosed inquiry slip

Team saves 10 men, 300 hrs. in labor costs at newspaper

"The Kent offset motor design cuts down operator fatigue, produces more and better work results per man hour of labor than any other method," says Building Manager L. G. Prine, of the Lansing Michigan State Journal.

Daily usage of Kent equipment has saved 300 hours per week or 10 men in the Journal building. Pictured above is the offset motor Kent floor machine being used for wet scrubbing with pick-up by a companion vacuum.

Let us show you how you can cut costs, too. The offset design makes the difference — *send coupon for the proof!*

KENT

KENT Company, Inc., 449 Canal Street, Rome, N. Y.

Yes, I want to cut maintenance costs! Send full details on your line of ☐ floor machines ☐ vacuums ☐ Boiler Cleaners.

Name.....

Address.....

City..... State.....

For more details circle NED-762 K7 on enclosed inquiry slip

BENCH SCALE
features half-travel scale

Objects of sufficient height to obscure the lower portion of standard scale dials can be weighed on this beamless bench scale which concentrates the reading in the upper portion of the dial housing. Distance from platform to reading area of dial is about 29 in. Dial diameter is 20 in. at reading line and capacity of scale is 250 lb in ½-lb graduations. Indicating mechanism can be locked when scale is not in use. Made by **Toledo Scale Co.**, Telegraph Rd., Toledo 1, Ohio.

For more details circle NED-763 K7 on enclosed inquiry slip

JIB CRANE
beam supported on roller bearing

Total beam deflection under full load does not exceed 0.060 in. per foot on this base-mounted jib crane. Heavy duty beam support bearing consists of a tapered roller bearing at the top of the support column. Below are a pair of steel rollers which bear on a wear band welded to the column. Rollers are mounted on antifriction bearings and are adjustable, making possible fast leveling of the beam without shims. Crane bolts to a suitable foundation. Available are 52 sizes in capacities from 500 to 10,000 lb, with boom lengths from 8 to 20 ft. Full 360-degree rotation is provided, even with electrical hoist equipment which uses a commutator assembly. Made by **Becker Crane & Conveyor Co.**, 4907 Ridge Rd., Cleveland 9, Ohio.

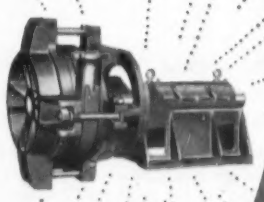
For more details circle NED-764 K7 on enclosed inquiry slip

Grinding Wheel Guidance

Completely revised and now approved by the U. S. Department of Commerce, "Grinding Wheel Simplified Practice Recommendation R45-57" contains 76 pages of data for all users and manufacturers of grinding wheels. Standard shapes and sizes of grinding wheels are classified according to their end use. Second section lists all standard sizes of grinding wheels available in each standard shape. Copy is available free by writing on company letterhead to the Grinding Wheel Institute, 2130 Keith Bldg., Cleveland 15, Ohio.

For more details circle NED-765 K7 on enclosed inquiry slip

Choose MORRIS TYPE RX Slurry Pump ... *for continuous trouble-free operation*



Morris Type RX Pump Features:

- Gland under suction pressure only. Practically eliminates packing troubles.
- To dismantle, only 4 bolts need be removed.
- Impeller and liner may be removed without disturbing piping.
- Right or lefthand rotation. Suction and discharge nozzles rotate to positions in any of 4 quadrants.

The Morris Type RX Slurry Pump offers end cover liner and separate suction disc, permitting use of special metals at points of greatest wear with minimal cost. It handles caustic or acid mixtures containing abrasives or solids; also ore concentrates, tailings, slag, filter and classifier residue.

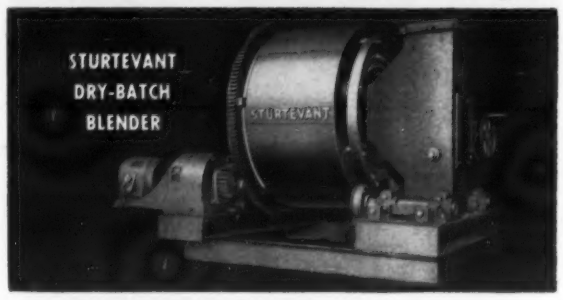
Write for Bulletin 185.

Morris Machine Works
Baldwinsville, N. Y.
Sales Offices in principal cities

MORRIS Centrifugal Pumps

For more details circle NED-766 K7 on enclosed inquiry slip

BLENDING COSTS cut 2 ways!



1. PRODUCTION SPEEDED UP BY 4-WAY MIXING
2. SHUT-DOWNS SHORTENED BY "OPEN-DOOR" DESIGN

Batches from 500 to 40,000 pounds are completely blended regardless of varying weights, densities or fineness of different ingredients. No dust loss!

Four different vertical and lateral mixing actions do the job in minimum time. Single lever control of single gate speeds loading and discharging.

"Open-Door" accessibility for quick, easy cleaning and maintenance *plus* 75-year-tested rugged construction add up to more output per machine-year.

Write for Bulletins on Sturtevant Batch Blenders and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

STURTEVANT
Dry Processing Equipment
The "OPEN-DOOR" to *lower* operating costs over *more* years
CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

For more details circle NED-767 K7 on enclosed inquiry slip

Introducing the new FEDERAL "55"

Handles work formerly confined to larger, more costly presses!

A great press—just check its dimensions! The "55" is outstanding for other reasons, too. Rugged. Precision-built. With the many *extra quality* features that have made FEDERAL PRESSES famous the world over. Available in geared or flywheel models, with mechanical or air clutch. WRITE FOR NEW CATALOG.

No. 55 Flywheel type 56-ton capacity

Federal Press Company
706 Division St., Elkhart, Ind.

FEDERAL *Open-back Inclinable* PRESSES

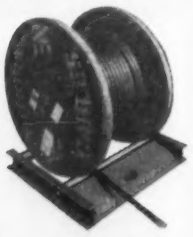
32 Years of Quality Construction

For more details circle NED-768 K7 on enclosed inquiry slip

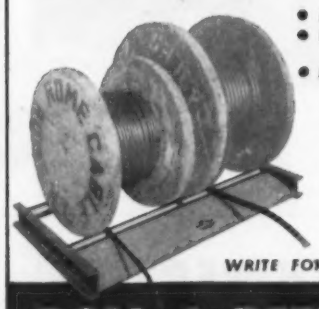
SAVE TIME AND MONEY HANDLING CABLE REELS

Easy, simple, fast! Minimum loading and unreeling effort. Modernly efficient.

Style A 2,000 lbs. cap. for reels up to 28 in. wide. 46.50 f. o. b. Cincinnati.



FOR WIRE, CABLE, ROPE



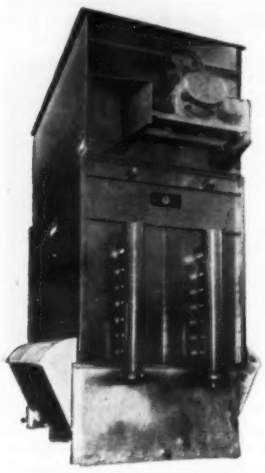
- *Heavy gauge steel frame*
- *Slanted front*
- *Ball bearing adjustable rollers*
- *No jacks*
- *Handles any reel diameters*
- *Positive roller lock for unloading*

Style B 4,000 lbs. cap. for 2 reels up to 24 in. wide each or 1 reel up to 48 in. wide. 84.50 f.o.b. Cincinnati.

WRITE FOR DETAILS TODAY

ROLL•A•REEL 4630 Reading Road Cincinnati 29, Ohio

For more details circle NED-769 K7 on enclosed inquiry slip



This AIR-COOLED CONDENSER *produces a* HIGHER VACUUM

▲ Using air as the cooling medium, the Niagara *Aero* Vapor Condenser produces a higher vacuum than other type condensers, with more economy of power and steam, with sustained full capacity in cooling or condensing, with no more than a nominal cooling water requirement, eliminating entirely your problems of water supply and disposal.

You get constant temperature, always uniform products and maximum production.

Write for Bulletin 129R

NIAGARA BLOWER COMPANY
Dept. ED-10, 405 Lexington Ave., New York 17, N. Y.
District Engineers in Principal Cities of U. S. and Canada

▲ For more details circle **NED-770 K7** on enclosed inquiry slip ▲

Safety Plus with Multigrip Floor Plate

Rugged USS Multigrip Floor Plate in your plant means safety plus durability plus low maintenance. The flat-topped risers have clean, even edges that provide non-slip traction for feet and wheels. The tough steel won't chip, crack or splinter, even after years of wear. The plates *can't* soak up oil or grease, and usually may be kept clean with simply a hose or broom. Get safety plus durability on your ramps, aisles, loading platforms, stairways and entire plant floor with Multigrip Floor Plate. Multigrip may be bent or formed where necessary, and is available in large plates, eliminating installation waste.

UNITED STATES STEEL CORPORATION, PITTSBURGH • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

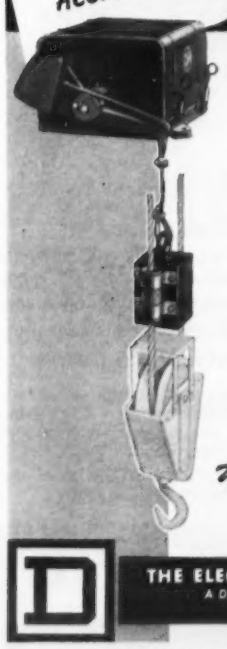
USS multigrip FLOOR PLATE

Sold by leading distributors from coast to coast

UNITED STATES STEEL

▲ For more details circle **NED-771 K7** on enclosed inquiry slip ▲

Prevent OVERHOISTING ACCIDENTS — EC&M LIMIT STOPS for AC and DC Cranes



• Crane operators work better when fear of overhoisting accidents is eliminated. The EC&M Limit Stop disconnects motor from the line for a quick stop.

On DC cranes with high hoisting speeds, dynamic braking reduces drift and aids in bringing the hook block to rest. Because EC&M Limit Stops are operated directly by the hook block, stretching of the hoisting cable does not affect tripping point.

EC&M Limit Stops are easily installed on both new and existing AC and DC cranes.

Write for Bulletin 1032
It gives the complete story of EC&M's Youngstown Safety Limit Stops

THE ELECTRIC CONTROLLER & MFG. CO.
A DIVISION OF THE SQUARE D COMPANY
CLEVELAND 28 • OHIO

8046

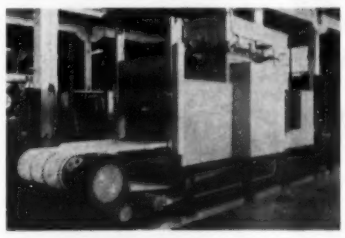
▲ For more details circle **NED-772 K7** on enclosed inquiry slip ▲

CONTROLLED HEAT BRANDER marks wood, plastics, rubber, fiber

Temperature controller utilized by this Acrohex 573 brander enables user to make perfect branded markings on wood, thermosetting plastics, rubber, fiber, and other materials. Products can be branded at 200 to 800° F. Control unit sets and holds a specific temperature which can be read on a small dial thermometer mounted on die holder or die. Features include interchangeable dies, type holders, and type; and baffle plate heat deflector to keep handle cool. Brander is furnished with extension cable that plugs into any 110-220 v ac outlet and is made in 90 to 700-w sizes. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

▲ For more details circle **NED-773 K7** on enclosed inquiry slip ▲

CONVEYER BELT OVEN for drying, baking, dehydrating



Drying and baking, dehydrating, and baking - on finishes are typical applications for this continuous belt conveyer oven. Belt carries product through heated zone, and can be arranged for both automatic loading and unloading facilities. It is 36 in. wide and is driven by electric motor at speeds adjustable from 2 to 10 fpm. A 6-ft extension on each end facilitates loading and unloading. Baking chamber measures 38 x 24 in. x 15 ft. Counterbalanced doors at each end adjust to desired opening. Ovens can be heated by gas, electricity, or steam. Gas-fired unit shown, with 1 million Btu burner, reaches maximum temperature of 450° F. Made by **Grieve-Hendry Co.**, 1408 W. Carroll Ave., Chicago 7, Ill.

▲ For more details circle **NED-774 K7** on enclosed inquiry slip ▲

Stainless Steel Products

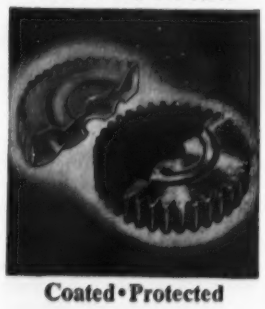
Schnitzer Alloy Products Co.—Guide book and engineering reference No. 58 contains complete data on wide range of stainless steel products distributed by this company. Tables give properties of various stainless steels, as well as corrosion data. Catalog is divided into sections on machine screws and nuts; cap screws, bolts, nuts, and rivets; wood and sheet metal screws and nails; handles; chain; turnbuckles; strainers; rope; brushes; hinges; wire cloth; pipe and tubing; fittings and valves; hose; ware; and bar, rod, and wire.

▲ For more details circle **NED-775 K7** on enclosed inquiry slip ▲

HOT MELT PLASTIC COATINGS for GEARS • TOOLS • PRECISION PARTS

BEFORE — SECONDS AFTER

Dip



Coated • Protected

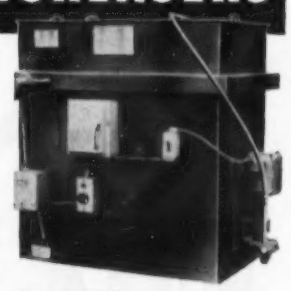
DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
479 Frelinghuysen Avenue, Newark 5, N. J.

▲ For more details circle **NED-776 K7** on enclosed inquiry slip ▲

Aircon VAPOR DEGREASERS

ANY SIZE . . . Standard or Custom



MODEL "75"

Aircon Vapor Degreasing Systems are available in a complete line, ranging in size, from the smaller bench and barrel-type units to the larger, permanent, high capacity degreasers.

Aircon Degreasers are:

Gas, Electric or Steam Heated • Complete Units with all safety equipment

NO EXTRAS TO BUY!

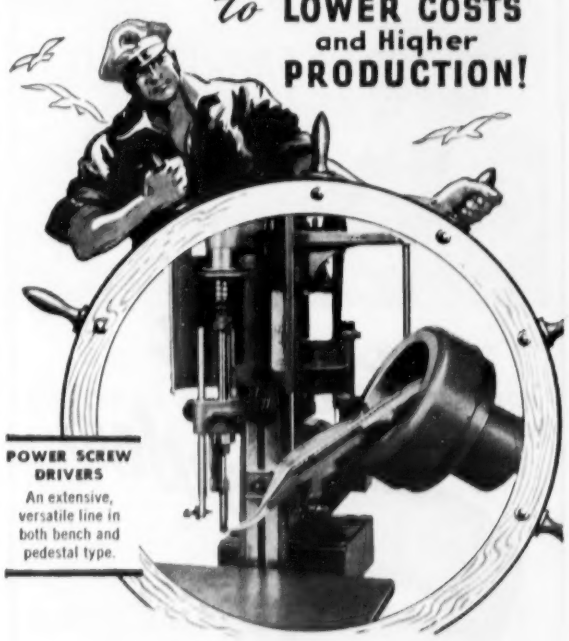
Write today for full information

WE ARE DESIGNERS AND ENGINEERS OF SPECIAL DEGREASING EQUIPMENT. CONSULT US ON YOUR DEGREASING PROBLEMS.

Armstrong & White
CHESWICK, PENNSYLVANIA

▲ For more details circle **NED-777 K7** on enclosed inquiry slip ▲

Pilot Your Way to LOWER COSTS and Higher PRODUCTION!



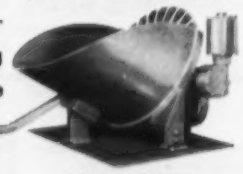
POWER SCREW DRIVERS
An extensive, versatile line in both bench and pedestal type.

Avoid the Reefs of Production Bottlenecks!

Use **DPS PARTS FEEDERS and ASSEMBLY MACHINES**

• The advantages are too great to overlook: Speed never before equalled . . . Economy . . . Greater Accuracy . . . and Stepped-up Profits. Write for catalog now . . . Tell us your problem . . . Send parts or assembly and our Engineering Department will make recommendations.

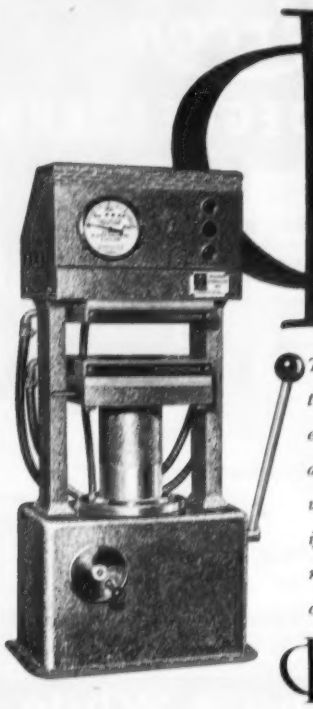
BOWL FEEDER
Electrical vibratory type to feed parts that cannot be tumbled.



BARREL FEEDER
with stationary ring cover for heavy-duty production.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT STREET • DETROIT 26, MICHIGAN

▲ For more details circle **NED-778 K7** on enclosed inquiry slip ▲



This mark identifies the finest bench presses ever made. If you need a hydraulic bench press, write for circular or if you prefer we'll have our nearest representative call on you . . .

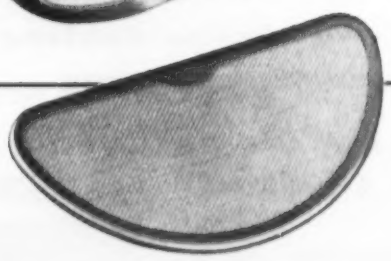
PHI PRESS
formerly Preco

Pasadena Hydraulics, Inc., 1434 N. Lidcombe St., El Monte, Cal.

▲ For more details circle NED-779 K7 on enclosed inquiry slip ▲

FABRICATED WIRE CLOTH PARTS

to your order



Our special business is specials . . . special fabricated wire cloth parts made to your specifications. We save you time, we save you overhead, we save you production worries. And, you get a better part at a lower cost.

We weave our own cloth . . . your guarantee of quality components. We are fully equipped to do all necessary cutting, shaping, fitting, welding, soldering, punching, binding, etc.

For more information on this "One-Stop" Wire Cloth Parts Service, send for our latest Parts Catalog.

NEWARK for ACCURACY

Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

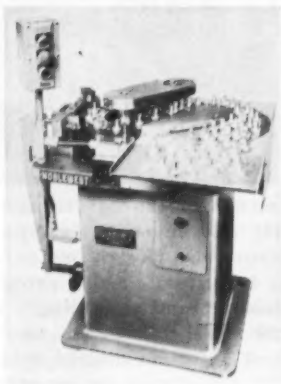
▲ For more details circle NED-780 K7 on enclosed inquiry slip ▲

LP-GAS SYSTEM
optional on fork truck line

Liquefied petroleum gas fuel system is now available as optional power on Clarklift line of fork trucks. Components of the LP-gas system are interchangeable on all Clarklift models. System requires a minimum of space and will not interfere with any truck function. Relief valve, excess flow check valve, quick-disconnect coupler, solenoid valve, hydrostatic relief valve, fused vacuum switch, and guard for the external tank are safety features of the UL-approved unit. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

▲ For more details circle NED-781 K7 on enclosed inquiry slip ▲

AUTOMATIC MARKING MACHINE
for thin-wall cup-shaped parts



Production in excess of 5000 clearly-marked thin-wall cup-shaped parts or tubes per hour is reported for this Dual-Dial automatic marking machine. Part numbers or other markings are permanently indented in workpieces. Two counter-rotating dials are driven through an adjustable variable speed drive by a ⅓-hp motor. Work feed dial carries part to a reciprocating feed finger which transfers it to a mandrel on the 12-station work dial. Parts are carried through a spring-loaded die holder where the mark is applied, and they rotate as they travel across the face of the marking die. Ejection is automatic. Made by **Noble & Westbrook Mfg. Co.**, 7 Westbrook St., East Hartford, Conn.

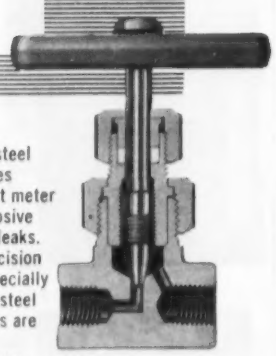
▲ For more details circle NED-782 K7 on enclosed inquiry slip ▲

Electronic Induction Heaters

Magnethermic Corp.—Details of 15, 30, and 40-kw electronic induction heaters which have ten building block features to adapt them for practically any need are given in 8-page bulletin EH 57-6. Included is guide to induction brazing and soldering, frequency selector, static hardening curve, and other engineering data.

▲ For more details circle NED-783 K7 on enclosed inquiry slip ▲

AMERICAN® needle valves



Teflon-packed, forged steel American® Needle Valves stand up in the toughest meter manifold jobs and other corrosive field services without gland leaks. Stainless or carbon steel precision machined valve bodies are specially suited for welding. Stainless steel centerless-ground valve stems are designed so that the valves can be repacked under pressure.

Standard valves design rated for pressures to 5,000 psi at 70°F. For pressure to 10,000 psi, upon request, valves are hydrostatically tested and individually inspected. Valves are furnished with graphite-impregnated asbestos packing for temperatures above 450°F.

Angle or straight patterns—screwed or union bonnets.

AMERICAN METER COMPANY

Executive Offices: Philadelphia 16, Penna. Sales Offices in Principal Cities

▲ For more details circle NED-784 K7 on enclosed inquiry slip ▲

Combines fine engineering *and* economy!

. . . new FOXBORO Pressure Transmitter

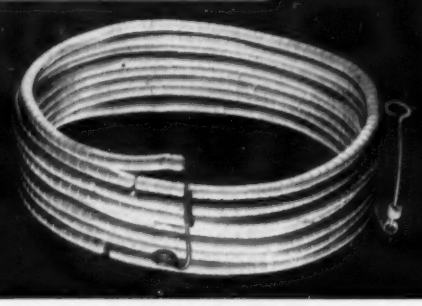
- Scale easily readable at 20 ft.
- Standard time-proved component parts
- Simple calibration "on location"
- Compact integral instrument

The new Foxboro M/44 Pneumatic Pressure Transmitter gives you a unique combination of fine engineering and economy. It's a compact, integral instrument . . . no attachments or "makeshifts." Utilizing standard, performance-proved Foxboro parts throughout, it assures you not only top performance, but easier stocking and servicing as well. "Convenience-design" makes calibration in the field a cinch. Drawn-steel, weatherproof, air-purged case with tough polyester plastic cover. A neat, high-efficiency, low-cost instrument for centralized operation or control. All standard ranges. Write for full details. **The Foxboro Company, 6610 Norfolk St., Foxboro, Mass.**

FOXBORO REG. U. S. PAT. OFF. | INSTRUMENTATION

▲ For more details circle NED-785 K7 on enclosed inquiry slip ▲

ARCOS WELDING FACTS



Heat-O-Coil Speeds Preheating and Stress Relieving of Pipe Welds

The Heat-O-Coil is a length of resistance wire covered with ceramic beads. Easy to handle—just wrap it around a pipe joint; connect its two ring ends to your welding generator; set current to produce required heat.

Use on any size pipe. Saves time and additional equipment for field use. Also useful where other means of heat treating cannot be used. Priced as low as $10.25 per coil.

SEND FOR FREE BULLETIN

. . . Gives all details, illustrated directions, Heat-O-Coil sizes and prices.

Arcos Corporation, 1500 S. 50th St., Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

▲ For more details circle NED-786 K7 on enclosed inquiry slip ▲

The *Toughest* STROKE COUNTER

200 Million Count Life

Endurance Rated COUNTERS for every purpose

Electric Counters and Actuators.

Stroke and Revolution Mechanical Counters.

Coil Winding Counters.

Automatic Batch Counters.

Rugged shaft and bearings.

Shakeproof—Only one screw in counter assembly. All steel chrome plated housing with snap on cover.

Reliable—no skip or overcount. Tamperproof reset.

Thousands used in Automobile and Aircraft Factories; in Stamping, Metal Working, Die Casting, and Plastic Molding Plants; in Foundries, Printing Plants and Factories.

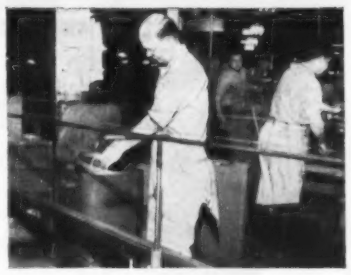
See your PIC Distributor or write for Catalog.

PIC *Production Instruments*
DIVISION OF GENERAL CONTROLS CO.
8066 McCormick Boulevard, Skokie, Ill.

42 Branch Offices and Representatives serving USA and Canada

▲ For more details circle NED-787 K7 on enclosed inquiry slip ▲

Air-Matic Parts Washer
frees machine operator for continuous parts production



Placed conveniently near the screw machines at the Pyle National Company plant in Chicago, Protectoseal Air-Matic Parts Washers clean parts after machining to remove chips, cutting oil and grease while the operator continues his machine work without loss of time.

Operated by a simple, effective air motor, the metal basket containing the parts is moved through the solvent with a minimum amount of turbulence to reduce solvent evaporation and avoid the danger of creating a vapor-laden atmosphere. A reciprocating compressed air motor is employed, rather than an electric motor, to avoid the possibility of a spark which might ignite the solvent vapors. Air is used to operate the motor only and there is no air agitation of the cleansing solvent. Pyle National report three years of continuous use without attention or service.

The basket containing parts is normally moved one inch up and down through the solvent; other units, such as the **Paint Spray Mask Washers,** have a longer stroke for the quick removal of heavier deposits of paint or grease.

Safe. A renewable fusible link melts to close the cover in the event of fire; extinguishing the blaze and protecting the operator.

For complete information, enter publication number on Reader Service Form or request Catalog No. 750-E from **The Protectoseal Company,** 1964 So. Western Avenue, Chicago 8, Illinois. *Advt.*

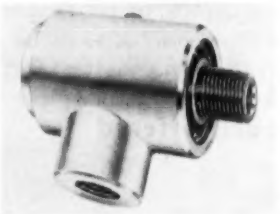
▲ For more details circle **NED-788 K7** on enclosed inquiry slip ▲

WATER STORAGE TANK
with ultra-violet sterilization

Built-in ultra-violet light continuously sterilizes contents of this distilled water storage tank. Use of the tank, together with other protection devices such as the Barnstead Ventgard and the Millipore filter, can often maintain sterility of contents to the degree that final sterilization steps can be eliminated. Tanks can be supplied in 5 to 1000-gal capacities, including vertical cylinder and box types. Made by **Barnstead Still & Sterilizer Co.,** 103 Lanesville Terrace, Boston 31, Mass.

▲ For more details circle **NED-790 K7** on enclosed inquiry slip ▲

ROTATING UNION
for speeds up to 2500 rpm



Designed for introducing air or hydraulic oil under pressure into clutches and other rotating equipment, this model 13 low-torque union will operate at speeds up to 2500 rpm, air pressures to 150 psi, and hydraulic pressures to 2000 psi. Short overhang simplifies installation in cramped locations. Different seals are suited for air or hydraulic service. Union is available with rotors having ⅜ or ½-in. right hand pipe threads, as well as ⅝-18 N.F. threads. Made by **Deublin Co.,** Dept. A, 1155 Waukegan Rd., Glenview, Ill.

▲ For more details circle **NED-791 K7** on enclosed inquiry slip ▲

SELF-CLOSING DRUM LID
converts drum to refuse container

Empty 55-gal drums can be used as refuse containers or for bulk storage of supplies by merely fitting them with Big Top drum lids. Large "Push" embossed on self-closing hinged flap encourages good shop housekeeping, and lid minimizes fire hazard in storing inflammable materials such as wipers and shop cloths. Opening is of ample size to accommodate most trash. Rain-slant design assures water run-off. It is made of 22-gage steel, finished in gray enamel, by **Witt Cornice Co.,** 2124 Winchell Ave., Cincinnati 14, Ohio.

▲ For more details circle **NED-792 K7** on enclosed inquiry slip ▲

picked for PACKAGE BOILERS

Yarway Type "B" Seatless Tandem Blow-Off Valve with angle valve sectioned to show balanced sliding plunger.

• Because a good blow-off valve makes good package boilers even better—leading package boiler makers use Yarway Blow-Off Valves.

You can specify Yarways, too! Yarway Seatless Valves have no seat to score, wear, clog or leak—give free, unobstructed flow and drop-tight shut-off.

Bulletin B-426 gives the full story. Write for it today.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.
Branch Offices in Principal Cities

YARWAY SEATLESS BLOW-OFF VALVE

▲ For more details circle **NED-789 K7** on enclosed inquiry slip ▲

No Instrument Like it for On-the-Job SURFACE CHECKING

Bausch & Lomb
SURFACE COMPARATOR

Here's a compact, portable and extremely accurate instrument for comparing surfaces and finishes with your "reference standard." The man at the machine, the foreman and quality control man can tell instantly if work is satisfactory . . . guesswork is eliminated, time saved and quality kept at a high grade. Surface Comparator is first instrument of its kind . . . perfect answer to surface comparison inspection (metal, paint, plastic, etc.). Net price, $30.00.

WRITE for 24-page Industrial Magnifier Guide Book (I-67). Gives complete information on Surface Comparator and hundreds of other magnifiers designed for industrial use. Bausch & Lomb Optical Co., 51621 Bausch Street, Rochester 2, N. Y.

BAUSCH & LOMB

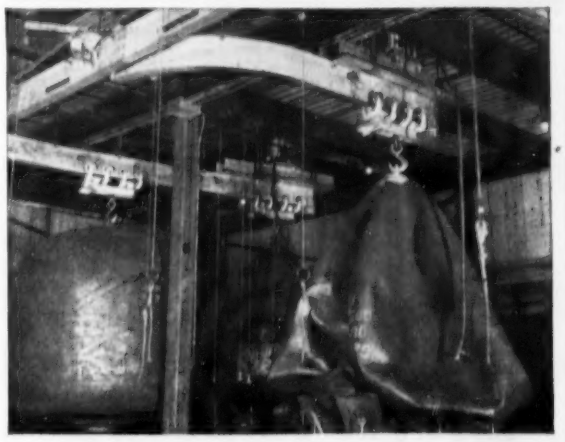
▲ For more details circle **NED-793 K7** on enclosed inquiry slip ▲

"SAND WIPER" rammer

Write for Form 5216 describing both bench and floor units or ask for a demonstration in your plant.

Ingersoll-Rand
11 Broadway, New York 4, N.Y.
8-508

▲ For more details circle **NED-794 K7** on enclosed inquiry slip ▲



Teamed Engineering for Efficient Sealdbulk Handling

U. S. Rubber Company and American MonoRail Engineers teamed up to develop this system.

Sealdbin containers, made by U. S. Rubber Co., each hold 11,000 pounds of carbon black. American MonoRail moves the Sealdbins from flat cars to special stations for discharge thereby minimizing manual labor, time, and waste.

Send for Bulletin C-1.

AMERICAN MONORAIL COMPANY
13116 ATHENS AVENUE • CLEVELAND 7, OHIO

▲ For more details circle **NED-795 K7** on enclosed inquiry slip ▲

What happens to plant safety when the lights go out?
(the true story of a needless accident)

"Suddenly the lights went out. We had lost our electric power. Then a cry of pain filled the air. Bill Dunlap, our best machinist, had tripped over a piece of bar stock in the dark. He was on the invalid list for over 2 weeks."

Don't risk accidents that sudden darkness brings. Install Exide Lightguard* Emergency Lighting Equipment. Units plug into your regular outlets—go on automatically when lights go out. Built-in automatic charger. Send coupon today.

*Lightguard is a trademark of The Electric Storage Battery Co., Reg. U.S. Pat. Off.

Exide® Industrial Division, The Electric Storage Battery Company, Phila. 2, Pa.
Send details on ☐ portable Exide Lightguards ☐ larger emergency lighting systems.
Name .....
Street .....
City ..... Zone ..... State .....

▲ For more details circle **NED-796 K7** on enclosed inquiry slip ▲

Are You Buying
RUBBER
at the RIGHT price?

Our Custom Molded Rubber Plant can supply you promptly with a wide choice of slab, pure and C. I. sheet, press die pads, cylinder-spring and specification rubber that's priced right. You buy from a price list that you can immediately understand. No tricky discounts! No gimmicks! Plus that . . . each of your orders is important to us and we are *flexible* enough to do a favor for a customer when you need it.

WRITE US
for our big E-Z to read price list. Contains other items, too! RUBBER JOBBERS INVITED.

BUFFALO WEAVING & BELTING COMPANY
210 CHANDLER ST.
BUFFALO 7, N. Y.

For more details circle NED-797 K7 on enclosed inquiry slip

It's OK Boys

I use the Modern Safety Drill Table for all sorts of jobs. No more bother with clamps, V-blocks, parallels. Instead of spending 20 minutes to make a tough set-up, I just drop in the work and am ready to drill in a couple minutes. I save a lot of time. In fact, the company guarantees that this combination drill table and vise will save its cost on labor alone in six months in your shop.

FREE TRIAL OFFER
Try it for 30 days at our expense. Write for illustrated literature and full details.

MODERN MACHINE TOOL CO.
2005 LOSEY AVENUE
Jackson, Michigan

For more details circle NED-798 K7 on enclosed inquiry slip

WE USE LABELON TO MARK STORAGE AND STOCK BINS, TAG TOOLS, INDICATE REPAIRS AND SERVICE WORK

WON'T SMUDGE • RESISTS: DIRT GREASE WATER ACIDS

LABELON PLASTIC Write on it TAPE

STICKS WITHOUT MOISTENING

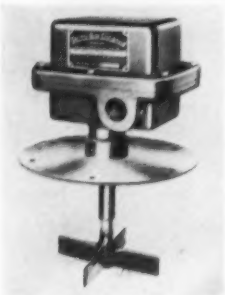
LABELON'S PERFECT FOR OFFICE FILES, FOLDERS AND DRAWERS . . . AND THEY SWEAR BY IT IN THE LABORATORY

For samples and prices, see your nearest dealer or write Dept. NED-10

LABELON TAPE CO., INC.
450 Atlantic Ave., Rochester 9, N. Y.

For more details circle NED-799 K7 on enclosed inquiry slip

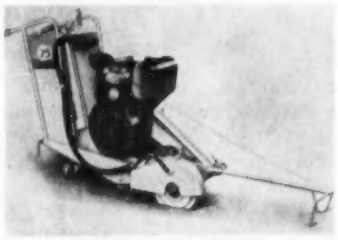
BIN LEVEL INDICATOR
redesigned for severe-condition use



Improvements made in the Roto-Bin-Dicator bulk material level control device permit its use where severe operating conditions may exist, such as vibration and high stresses on the paddle and shaft assembly. Standard and explosionproof models are adaptable for use in bins under pressure or vacuum; or in bins, chutes, or conveyers handling materials which tend to "bridge over" or "rat-hole." Slowly rotating paddle mounted on a flexible shaft which projects into the bin is driven by a small motor in an external housing. When material partly or entirely covers the paddle, its rotation is stopped, and the torque exerted actuates a Micro Switch which, in turn, starts or stops machinery controlling the bin level. When material level drops below the paddle, rotation resumes. Made by **Bin-Dicator Co.**, 13946-100 Kercheval Ave., Detroit 15, Mich.

For more details circle NED-800 K7 on enclosed inquiry slip

POWER CONCRETE SAWS
7½ and 18-hp models offered



Lightweight model 75 Target concrete saw, one of two all-purpose models offered, is powered by a 7½-hp Wisconsin air-cooled engine. Unit is easily lowered into basements, and is compact for maneuvering through doorways and around machinery and light poles. The 18-hp model 180 meets demands for repair and patch jobs, yet has the power to handle large construction projects. Both units have a lock-type screw feed for fast lowering and raising of blade. It also prevents back-off of blade in heavy sawing. Four fixed wheels hold blade square on cutting line, even on sidehill sawing, or when operating over uneven surfaces. Blade guard accommodates 14-in. blades. Water pump is optional. Made by **Robert G. Evans Co.**, Dept. 12, 6024 Troost Ave., Kansas City 10, Mo.

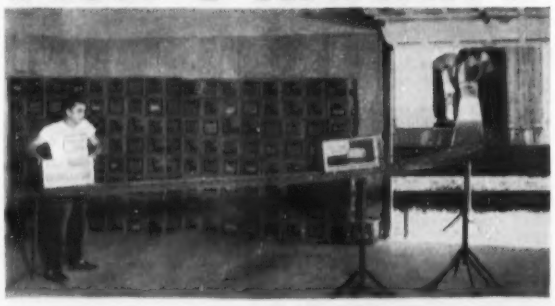
For more details circle NED-801 K7 on enclosed inquiry slip

Gear & Speed Reducer Data

Ohio Gear Co.—Packed with 186 pages of power transmission data, the "Ohio Gear 1957 Handbook" contains engineering charts, tables, and formulas to aid the designer or engineer in selecting the right gears and speed reducers for any application. Dimensions and other information are given on spur, bevel, spiral, helical, and worm gears, and on racks. Speed reducer section deals with ratios, horsepower, torque, and installation dimensions.

For more details circle NED-802 K7 on enclosed inquiry slip

Ask Standard



how to solve "spot" handling problems with "Litewate" roller conveyors

HERE'S an economical way to meet production, stacking, and loading needs with "Litewate" straight and curved roller conveyors. Easily carried by one man, easily set up. Durable, too. Available in aluminum or steel models from stock.

For details, see the Standard Engineer listed in the phone book or write — STANDARD CONVEYOR COMPANY, General Office: North St. Paul 9, Minnesota. Sales and Service in Principal Cities. Ask for Bulletin 63E. Address Dept. K10

50 years

Standard GRAVITY & POWER CONVEYORS

For more details circle NED-803 K7 on enclosed inquiry slip

Bathey BINS

FOR SMALL PARTS ASSEMBLY AND STORAGE . . .

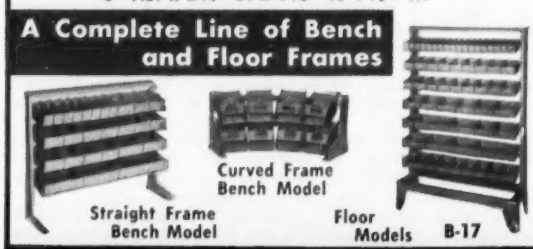
Independently suspended bins with parts visible. Saves time and money.

MBC

STO-BINS
5 SIZES
6" F.B. x 2¾" D. x 1¾" to 11⅛" W.

Pat. Pending
FLO-BINS
3 SIZES
6" F.B. x 2¾" D. x 1¾" to 7⅜" W.

A Complete Line of Bench and Floor Frames



Straight Frame Bench Model
Curved Frame Bench Model
Floor Models B-17

BATHEY MFG. CO.
100 S. MILL STREET PLYMOUTH, MICH.

For more details circle NED-804 K7 on enclosed inquiry slip

For Faster, Better Soldering

Use Rubyfluid

RUBYFLUID'S better soldering flux—liquid or paste—assures you of strong, neat unions, quickly and easily. RUBYFLUID'S fast acting formula wets out freely . . . is free from objectionable and harmful fumes . . . is economical to use.

For stainless steel soldering, use RUBY'S Special Stainless Steel flux . . . designed specifically for this application . . . requires no extra heat, no extra equipment, will not corrode or discolor metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

For more details circle NED-805 K7 on enclosed inquiry slip

Eliminate Shipping Labels!

PRINT DIRECT
Speeds Up Freight Marking

Quick! Accurate! Easy! Print shipping information direct on cartons, boxes, packages. Eliminate double operation of preparing labels and then pasting them to the containers. Get 1,000 or more clear, sharp impressions from one stencil without re-inking. New FORM-CUT® Stencil has facsimile of your label or shipping form die-impressed into the stencil. Then type or write in address or identification data . . . attach to duplicator . . . and print, like using a rubber stamp. Write for Literature and FREE SAMPLE FORM-CUT STENCIL AND PRINT.

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

Also for addressing shipping tags and labels . . . prints postcards, menus, forms, bulletins. 8 complete outfits: $9.50 to $99.50, including supplies (f.o.b. factory). At office or shipping room supply dealers.

OVER 35 YEARS MULTISTAMP® STENCIL DUPLICATOR

For more details circle NED-806 K7 on enclosed inquiry slip

Cut Fast and Cool!

S. S. WHITE CARBIDE BURRS cut *fast* to reduce your operating time. They cut *cool*. Burr heads are made of tungsten carbide . . . necks and heads of steel. They will give you long, economical use.

S. S. WHITE CARBIDE BURRS are available in a wide range of sizes and shapes. Write for Catalog T-55.

THE S.S.White INDUSTRIAL DIVISION
10 East 40th St. New York 16, New York (D8)

For more details circle NED-807 K7 on enclosed inquiry slip

"OUR CJ TOOLING is fast and clean for heavy duty work on sheets, and we're also getting big profits from punching holes in channels, angles etc. That's a tough proposition for the average shop . . . but not for us! With our WALES equipment we cut vees and corners notches at the same time. It really boosts our production."

WALES CJ Units punch unlimited straight line staggered and scattered patterns . . . round or shaped holes. Die retention design features rapid die change WITHOUT REMOVING UNIT from set-up . . . provides controlled slug ejection. Time saving and money saving. Same units may be used over and over again in other patterns.

SEND FOR BULLETIN No. 21J
Shows actual job work and complete data of CJ sizes.

WALES MOBILE FIELD UNITS
Demonstrate CJ and other tooling right at your door. Ask for details.

WALES Strippit COMPANY
A UNIT OF HOUDAILLE INDUSTRIES, INC.
AKRON, NEW YORK
WALES-STRIPPIT OF CALIF., SOUTH GATE, CALIF.
WALES-STRIPPIT OF CANADA LTD., HAMILTON, ONT.
"...the Wales-Way is the PLUS-PROFIT way"

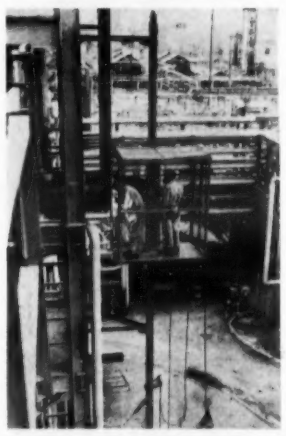
For more details circle NED-808 K7 on enclosed inquiry slip

ROLLER DOLLY KIT
for moving up to 6000-lb loads

Basic component of this Multiton Junior moving kit is a set of four roller dollies, each rated 1500-lb capacity, on which machinery or heavy equipment weighing up to 6000 lb can be moved. Dollies have swivel heads and can be positioned under load as needed. Each has three heavy-duty rolling cylinders which facilitate movement over rough, uneven surfaces. In addition to dollies and swivel heads, kit includes a cast aluminum arm for turning the dolly, two tandem connectors for joining dollies together, and a two-handle sheet steel carrying case. Long-handled turning bar, for use when frequent turns-in-motion are required, is available at extra cost. Kit sells for $136. Made by **Stokvis-Edera & Co.,** Dept. 16J, 18 Secatoag Ave., Port Washington, N. Y.

For more details circle NED-809 K7 on enclosed inquiry slip

DEMOUNTABLE ELEVATOR
passenger unit runs on monorail



With a capacity of 2000 lb or 8 passengers, this demountable elevator is suited for transporting personnel during construction, maintenance, repairs, and other industrial operations. It meets most code and ASA specifications and operates on a vertical monorail. Easily set up and operated, it can be disassembled and quickly set up in another location. Elevator can also be used in a pit or shaft for carrying men or materials. Operation by two independent hoisting cables is controlled from within the car. Various safety devices are built-in. Hoisting machinery is enclosed in a locked housing. Made by **Hawkeye Engineering Co.,** Dept. 101, 1013 S. State St., Syracuse, N. Y.

For more details circle NED-810 K7 on enclosed inquiry slip

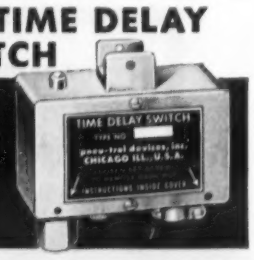
Controlling Dust

American Air Filter Co.—How the type W Roto-Clone dynamic precipitator combines in one package an efficient dust collector, exhauster, motor, and drive is shown in 16-page catalog 274B. Wiring diagrams, performance tables, design and operating details, water supply tables, and efficiency graphs supplement the text. Twelve sizes have capacities from 1000 to 50,000 cfm.

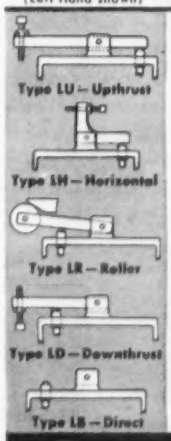
For more details circle NED-811 K7 on enclosed inquiry slip

Pneu-Trol TIME DELAY CONTROL SWITCH

. . . Gives Cylinder Applications Greater Efficiency Accuracy . . . Wider Use!



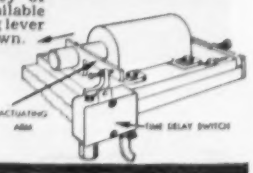
For any type actuation Left or Right Hand. (Left Hand shown)



- **Holds Cylinder dwell accurately to fraction of second.**
- **Automatically re-sets.**
- **Simple, Compact, Rugged.**

You can hold any motion or operation controlled or actuated by air or hydraulic cylinders at a positive stop on either end of the stroke for ¼ to 60 seconds in 20 to 1 ratios with Pneu-Trol Time Delay Control Switches. Simple in design with positive hydraulic timing action . . . compact and easily mounted on the machine or fixture, Pneu-Trol Switches are providing millions of trouble-free actuations in solenoid-operated cylinder applications of every type. Positive, controlled time dwell permits wider use of air or hydraulic power in automatic operations, increases accuracy of work by insuring split-second accuracy of the dwell. Available with 5 actuating lever linkages as shown.

Switch mounted to provide dwell at end of power stroke of single action, spring return cylinder.

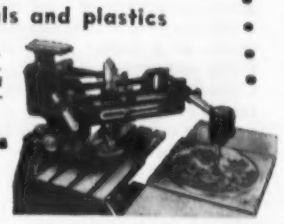


Pneu-Trol DEVICES, INC.
1432 N. KEATING AVENUE • CHICAGO 51, ILL.

For more details circle NED-812 K7 on enclosed inquiry slip

how to get
faithful 3-dimensional reproduction
in steel, other metals and plastics

Use the LOW COST precision-built Preis Panto 3D-5 Engraving Machine. Does both 2 and 3 dimensional engraving effortlessly.



- Reversible spindle for enlarging or reducing from a model, die or sample
- Precision ball bearings throughout
- Reduction ratio range—1.6:1 to 7:1
- Four spindle speeds—7,000 to 18,000 RPM
- Micrometer adjustment collar
- Provided complete with floor stand and work tables

TRADE MARK PANTO

Write for complete details and prices. For immediate attention write directly to manufacturer below. Ask for nearest representative.

H. P. PREIS ENGRAVING MACHINE CO.
649 U.S. Route 22, Hillside, N. J.

For more details circle NED-813 K7 on enclosed inquiry slip

Longer compressor life, greater freedom from maintenance are provided by this compressor with Safe-Q-Lube, a positive pressure oiling system exclusive with Quincy compressors. Crankshaft and connecting rods are rifle drilled to carry oil to connecting rod bearings and piston pins. Timken main roller bearings are spray lubricated. Safe-Q-Lube system also unloads compressor automatically for starting, stopping or in case of low oil pressure. Available on most models. Nationwide authorized service. Industrial compressors from 1 to 90 CFM. Write Dept. NE-56 for literature today.

Quincy COMPRESSORS

QUINCY COMPRESSOR CO., QUINCY, ILLINOIS

For more details circle NED-814 K7 on enclosed inquiry slip

Cut Maintenance $600 yearly per unit with WORLD Hand Dryers

Best By Test!
Factory Guaranteed!

THOUGHTFUL BUYERS USE WORLD!
Marshall Field & Co.
Northwestern University
Chrysler Corp.
Union Pacific Railroad
Libby-Owens-Ford
Frick Building
U. S. Army
U. S. Navy
Gimbel Brothers
Howard Johnson's
Alton, Ill. Schools
Pick Hotels
Gulf Oil

Each high speed WORLD Hand Dryer can save up to $600 per year on paper and maintenance . . . dry hands fast as towels . . . keep washroom clean and sanitary.

Prove it to yourself under our FREE trial offer! Full details on request.

MAIL THIS COUPON NOW!

WORLD DRYER CORPORATION
616-22 W. Adams St., Chicago 6, Ill.

Gentlemen: Without obligation send me copies of letters from users, also folder of facts including cost-saving figures and full details on your FREE-TRIAL offer.

My name _____
Firm name _____
Street _____
City _____ State _____

For more details circle NED-815 K7 on enclosed inquiry slip

FASTER, BETTER BRAZING
for ALUMINUM ASSEMBLIES

Dip brazing in an Ajax Electric Salt Bath Furnace puts the fabrication of aluminum assemblies on a low cost mass production basis.

All joints are brazed simultaneously—in a matter of seconds. Close tolerances are assured. Clean, high quality brazes are obtained by either clad, wire, shim or paste methods. Production is increased because of fast salt bath brazing. Costs are reduced. Write for case history bulletins. Let Ajax's Metallurgical Service Lab demonstrate dip brazing on your assemblies at no obligation.

AJAX ELECTRIC COMPANY
103 Allen Street
Philadelphia 23, Pa.

TYPICAL
Complicated aluminum heat exchangers that withstand 1000 psi pressures and 300°F. to 500°F. temperatures are brazed in this Ajax salt bath in a matter of seconds.

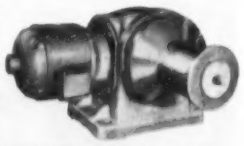
▲ For more details circle NED-816 K7 on enclosed inquiry slip ▲

SPOT BOX CARS, QUICKLY and EASILY with ONE MAN and a...

STEPHEN S-ADAMSON CAR PULLER

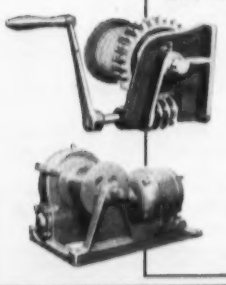
- Save time, labor and money... one man can quickly and easily spot up to 6 fully loaded box cars at a speed of 45 feet per minute.
- S-A Car Pullers are self-contained units that require no additional housings.
- Available with Vertical Capstans that pull from any direction or Horizontal Capstans that pull from two directions. A type and size to meet your exact requirements... units available that will move up to 12 loaded box cars at one time.
- Ideal for any installation, large or small, for the economical moving of box cars, and docking of barges. Ruggedly constructed to provide years of trouble-free service.

VERTICAL CAPSTAN


HORIZONTAL CAPSTAN

WRITE TODAY... REQUEST CATALOG NO. 753

LIFT HEAVY LOADS QUICKLY & EASILY WITH...



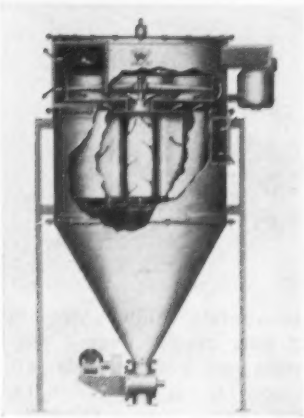
S-A WINCHES

The S-A line of Hand and Motor Winches will provide dependable, trouble-free lifting power wherever and whenever you need it. There's a type and size to meet your specific requirements. S-A Winches are STOCKED for immediate delivery. Write today for complete information... request Catalog No. 853.

STANDARD PRODUCTS DIVISION
STEPHEN S-ADAMSON MFG. CO.
12 Ridgeway Ave. Aurora, Illinois

▲ For more details circle NED-817 K7 on enclosed inquiry slip ▲

DUST SEPARATOR-FILTER
designed for continuous operation



Efficiencies up to 99.99 per cent are claimed for this modified RJ dust control unit which employs the Hersey principal of high velocity reverse air cleaning, with dust deposited on the outside of filter sleeves. Unit is suited for separating product from air-steam in pneumatic conveying systems. It is designed for automatic continuous operation. No shutdown for cleaning is required, as product discharge is handled automatically and continuously by a Day rotary valve. All moving filter parts are on the clean air side. Available from **Day Sales Co.,** Dept. NED, 810 Third Ave. N. E., Minneapolis 13, Minn.

▲ For more details circle NED-818 K7 on enclosed inquiry slip ▲

PHOTOCOPY MACHINE
makes copy in 15 seconds

This Coronet photocopy machine takes less than 15 seconds to make a standard black-on-white copy. Maximum copying width is 18¾ in., with no limit on length. Other features include a Micro-Dial control designed to reduce 80 per cent of the exposure-setting errors, a trap device which automatically guards against accidental paper insertion, simplified access to exposure section, and a dynamic production gear for high-speed volume work. Unit can turn out more than 2500 letter-size copies in 8 hours. It employs the basic diffusion-transfer process which delivers dry, permanent copy of everything that can be seen on the original. Copies are made under any light. Made by **Cormac Industries, Inc.,** 80 Fifth Ave., New York 11, N. Y.

▲ For more details circle NED-819 K7 on enclosed inquiry slip ▲

Masonry Coloring

L. Sonneborn Sons, Inc.—Uses and applications of Sonobrite alkali and fade resistant integral pigments for coloring concrete, mortar, and cement mixtures are covered in illustrated 6-page folder. These red, green, buff, and brown coloring materials can be added to concrete for floor toppings, walls, sidewalks, and brick mortar, as well as to such commercial cement products as block, tile, and precast masonry.

▲ For more details circle NED-820 K7 on enclosed inquiry slip ▲

for corrosive transfer service . . . an outstanding alloy metal pump

The positive advantages of this "application engineered" pump . . . a natural for corrosive transfer service are outlined in Bulletin No. 310. You'll want to have this information. Write for a free copy today.

DORR-OLIVER INCORPORATED
WORLD-WIDE RESEARCH • ENGINEERING • EQUIPMENT
STAMFORD • CONNECTICUT • U.S.A.

▲ For more details circle NED-821 K7 on enclosed inquiry slip ▲

Answer book
for your questions about Stainless

We've taken our own experience in making Stainless—added a lot we've learned about fabricating Stainless—and put it in this 142-page Working Data Book.

Call your Carpenter representative and ask for a copy of the Stainless Working Data Book. He'll be glad to give you one. And when you talk to him, put him to work on any special problems you may have. He knows a lot about Stainless.

Make full use of Carpenter's service to users of Stainless. Call your nearest Carpenter Service-Center today for a copy of "Working Data for Carpenter Stainless and Heat Resisting Steels" . . . or for personal attention to a specific problem.

The Carpenter Steel Company
118 W. Bern St., Reading, Pa.

▲ For more details circle NED-822 K7 on enclosed inquiry slip ▲

SILICONE RUBBER Compound

Vulcanizes at Room Temperature

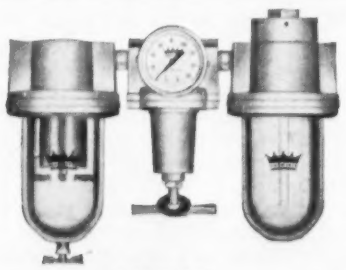
RTV Silastic forms a rubbery silicone solid. *Stays rubbery,* though exposed to temperatures as low as −100 F or as high as 400 F.

Does your caulking, sealing, encapsulating or potting problem call for a material with superior resistance to temperature extremes, moisture, oxidation, weathering—and dielectric strength beyond the limits of ordinary caulking and sealing compounds? Test RTV Silastic at our expense! Do it now!

Free Sample
and complete technical literature
Write for yours today!

DOW CORNING CORPORATION
Midland, Michigan
DOW CORNING SILICONES

▲ For more details circle NED-823 K7 on enclosed inquiry slip ▲



"COMBO" UNITS Bulletin 300
REGULATORS Bulletin 301
FILTERS Bulletin 302
LUBRICATORS Bulletin 303

NEW *Crown* BULLETINS TELL HOW...

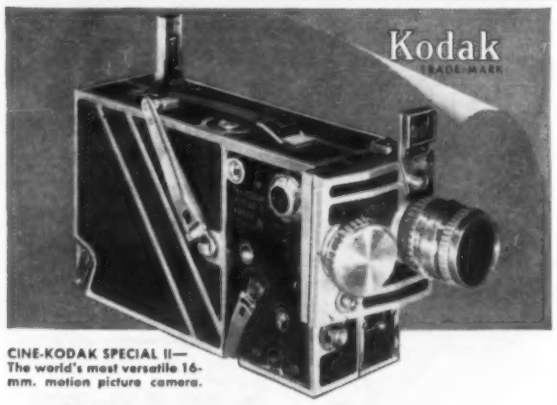
Hannifin's newest development, the Crown Line of FILTERS, REGULATORS and LUBRICATORS, saves money wherever air power is used. The filters remove dirt and scale without robbing you of precious power. The regulators let more air through when it's needed than other regulators do. The lubricators operate on minimum pressure differential—they are quicker and easier to fill, too. Available now—local, distributor stocks in many areas. Write for bulletins, for name of nearest distributor.

COMPLETE RANGE OF SIZES

HANNIFIN

Hannifin Corporation, 527 S. Wolf Road, Des Plaines, Ill.
FILTERS • REGULATORS • LUBRICATORS

▲ For more details circle NED-824 K7 on enclosed inquiry slip ▲



CINE-KODAK SPECIAL II—
The world's most versatile 16-mm. motion picture camera.

Make movies that work for you!

In almost every industrial activity—engineering, manufacturing, employee training, research, safety and methods evaluation—in-plant movies are the fastest, easiest, and most effective method for putting across your story.

And for on-the-job movie making, many leading industrial companies have chosen the Cine-Kodak Special II Camera. It has the versatility to handle almost any type of job. Yet its simplicity of operation enables you to get high-caliber results almost as easily as taking home movies.

WRITE FOR FREE BOOKLET, V1-3, describing the Cine-Kodak Special II.

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

For more details circle NED-825 K7 on enclosed inquiry slip

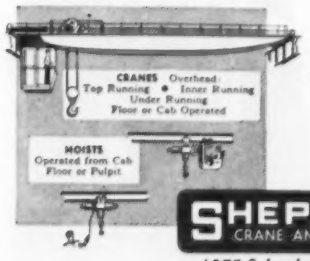
SHEPARD NILES

Large Industrial Cranes 1 to 450 TONS

FOR OVER 50 YEARS, Shepard Niles has been a distinguished name in cranes. A pioneer in the overhead crane industry, Shepard has never failed to modernize and progress through the years. Today its cranes serve thousands of satisfied users, plus an ever-increasing number of new customers.

Shepard offers a complete line of heavy industrial cranes . . . from 1 to 450 tons . . . for light, medium or heavy service. Available for constant or intermittent duty in slow, medium and high speeds; operated from cab or floor. Let a Shepard Niles representative help you select the crane that best fits your plant's load-handling requirements.

Write for latest Bulletin . . . request a representative to call.



America's Most Complete Line of Cranes and Hoists Since 1903

SHEPARD NILES
CRANE AND HOIST CORPORATION
1875 Schuyler Ave., Montour Falls, N.Y.

For more details circle NED-826 K7 on enclosed inquiry slip

MASONRY DRILL ATTACHMENT used with heavy duty ¼-in. drill

From 3/16 to 1-in. diameter holes can be drilled in all types of masonry with this rotary impact masonry drill attachment for heavy duty ¼-in. electric drills. It inserts into the drill chuck, and the masonry bit is secured with a set screw. Inner cam action gives a hammer-like blow every half revolution. Attachment weighs 20½ oz and adds 4¾ in. to drill length. Carbide tipped bits, offered in above sizes, have double, large, straight flutes for fast chip removal. Made by **Ideal Industries, Inc.,** 1032 Park Ave., Sycamore, Ill.

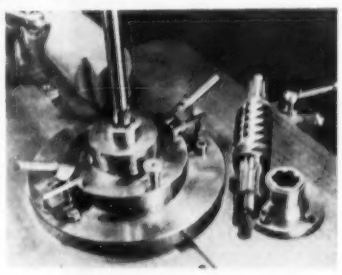
For more details circle NED-827 K7 on enclosed inquiry slip

TOWING TRACTORS have 5000 and 6000-lb drawbar pulls

Compact and maneuverable Paymover two-wheel drive towing tractors have torque converter drive and automatic transmissions. Models T-50 and T-60 have drawbar pulls of 5000 and 6000 lb, respectively. Head and tail lights are standard equipment, and various coupler attachments are available. Two and four-wheel steer, four-wheel drive tractors will be offered soon. Made by **Frank G. Hough Co.,** 746 Seventh Ave., Libertyville, Ill.

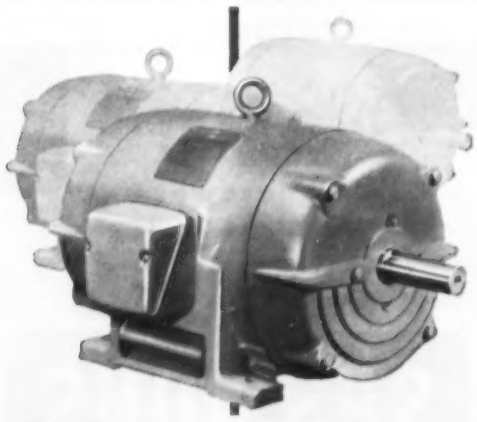
For more details circle NED-828 K7 on enclosed inquiry slip

SPLINING ATTACHMENT for 1-in. keyseater



Splining attachment for the Morrison 1-in. keyseater (*NED June* '54) consists of a master jig-bored plate, taper pinned in two places and bolted to the table top. Work is held in a rotary fixture which, with its plunger, indexes any number of splines or keyways. Attachment can be removed, then relocated accurately on the machine by the taper pins. Hardened steel rollers back up the cutter bar above and below the cut, eliminating any taper in the work. Table backs away 0.040 in. on the up stroke for cutter relief. Made by **D. C. Morrison Co.,** Box 1017-N, Cincinnati 1, Ohio.

For more details circle NED-829 K7 on enclosed inquiry slip



What motor type does your job require?

Louis Allis offers them all

This complete line includes drip-, splash- and explosion-proof motors, gear motors, and single- and multi-speed types in sizes up to 1500 hp. Cast-iron housings, locked bearing construction, corrosion-resistant insulation — Louis Allis motors and drives give you all these long-life, low-cost benefits. They're balanced for quiet operation . . . minimum power and maintenance cost. For particulars, write The Louis Allis Co., 436 East Stewart Street, Milwaukee 1, Wisconsin.

LOUIS ALLIS

For more details circle NED-830 K7 on enclosed inquiry slip

SMALL STEAM TRAP

. . . but large capacity!

New Design
New Operating Principle

Small as a tee fitting! That's the Sarco TD . . . all sizes ⅜ to 1"!

But don't let the small size fool you! ½" Sarco TD, for example, has capacity of 1280 lbs/hr, 150 psi, saturated steam temperature.

Capacity is determined, *not* by a bulky body, but by the effective orifice, valve action, pressure drop, and condensate temperature.

Few of many advantages

Same trap and large capacity seat for all pressures, 10 to 600 psi . . . light or heavy loads. Self-adjusting. Has no valve mechanism. Only one moving part.

Ask for 60-day trial trap and strainer. No cost or obligation. Buy *only* if satisfied. Specify size, use. Sarco Co., Inc., Empire State Bldg., N. Y. C. 2228-F

SARCO Thermo-Dynamic STEAM TRAP

THE MODERN TRAP THAT IS MAKING STEAM TRAPPING HISTORY!

For Temperature Regulators, see Sarco ad, page 89

For more details circle NED-831 K7 on enclosed inquiry slip

in a matter of minutes you can

REPAIR DAMAGED GALVANIZED SURFACES

with AMCO galvanizing compound

AMCO No. 321 (Powder) flows freely, covers completely, will not damage area around the repair, makes a perfect bond with the base metal and surrounding zinc coating. Comes in 1, 10 and 100 lb. containers.

AMCO No. 322 (Stick) is the same as No. 321 but in stick form for convenience in repairing areas not easily accessible. Ideal for overhead repairs, wire cables, etc. Three sticks per pound.

AMERICAN SOLDER & FLUX CO.
19th and Willard Streets, Philadelphia 40, Pa.
FLUX MANUFACTURERS SINCE 1910

For more details circle NED-832 K7 on enclosed inquiry slip

new RED TIP S-C* rod can cut costs for you . . .

*"super-cutting" rod produced semi-continuously available only from the MUELLER BRASS CO. . . . send for complete manual

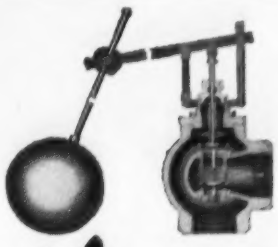
MUELLER BRASS CO.
PORT HURON 37, MICHIGAN

194

please send me a copy of your ENGINEERING MANUAL FM-3010

NAME _____
COMPANY _____
ADDRESS _____

For more details circle NED-833 K7 on enclosed inquiry slip



low cost liquid level control

Klipfel FLOAT VALVES

On the majority of liquid level control applications, there's no need for fancy electric-electronic set-ups. A simple float valve, correctly engineered for the particular service, does the job just as well, at lowest cost.

Klipfel Float Valves assure dependable, trouble-free service with a minimum of maintenance.

Write today for your copy of Klipfel Bulletin 254. It gives helpful type and size selection data and complete description of the wide range of Klipfel types, styles and sizes for every service.

Klipfel VALVES, INC.
1083 LINCOLN AVE.
HAMILTON, OHIO
Export Office—1010 Schaff Bldg., Philadelphia 2, Pa.

For more details circle NED-834 K7 on enclosed inquiry slip

Carriers automatically route garments to different destinations, depending upon way they are hung on conveyor. Unloading is automatic. Other A-F carriers will pick up loads as well.

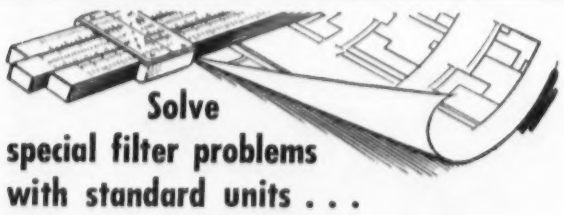
With A-F custom carriers, TROL-E-VEYOR does far more than just "carry"!

Trolley conveyor is only as efficient as the carriers, hangers or hooks that carry the load. Now, with *pre-engineered* A-F Trol-e-veyor you can get *custom engineered* carriers that automatically pick up and discharge loads, automatically route items to different destinations—carriers especially suited to your handling needs. Usually, these are very simple devices, available at low cost. Yet they give you all the advantages of a custom conveyor system. And still, the basic savings of A-F Trol-e-veyor (made of mass-produced standard components) are passed on to you. Before you buy a trolley conveyor, check A-F Trol-e-veyor. You may get a far more automatic system at little or no extra cost! Write today.

A-F Conveyors
A-F founded the package conveyor business in 1901.

The Alvey-Ferguson Co., Dept. SA-10, Cincinnati 9, Ohio

For more details circle NED-835 K7 on enclosed inquiry slip



Solve special filter problems with standard units . . .

Got a filter problem? Solve it with one of our many standard units. Wide range of requirements covered!

ACIDS, AIR, ANTIBIOTICS, ANTIFREEZE, BEVERAGES, CATALYSTS, COATINGS, CONFECTIONS, COOLANTS, COSMETICS, CUTTING FLUID, DETERGENTS, ESSENTIAL OILS, FATS, FOODS, FUEL, GASES, GASOLINE, GREASE, HYDRAULICS, INTERMEDIATES, LACQUERS, LIQUORS, MEDICINES, OILS, OINTMENTS, PAINTS, PASTES, PETROCHEMICALS, PIGMENTS, REFRIGERANTS, SOLVENTS, SYNTHETICS, SYRUPS, TOOTHPASTE, VARNISHES, VEHICLES, VITAMINS, WATER, WAXES

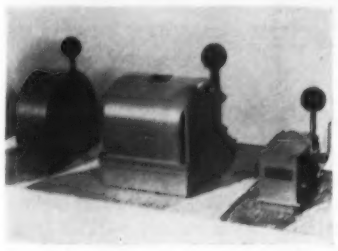
Write for Purolator General Filter Catalog, or send schematic drawing and details of your filter problem for specific recommendation. Purolator Products, Inc., Rahway, New Jersey.

Filtration For Every Known Fluid

PUROLATOR PRODUCTS, INC.
Rahway, New Jersey and Toronto, Ontario, Canada

For more details circle NED-836 K7 on enclosed inquiry slip

AC-DC MASTER SWITCHES
general and heavy duty types have up to 12 circuits

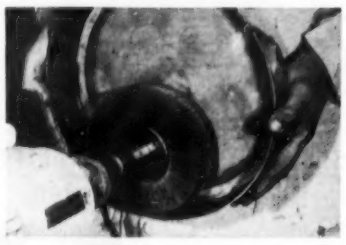


Line of alternating and direct current master switches includes a new heavy duty under - desk unit and redesigned general and heavy duty surface-mounted models. Under-desk unit consists of operating head and switching unit. Various handle modifications are available in this 4, 6, 8, and 12-circuit switch. Operating heads have seven points in each direction.

Redesigned heavy duty surface-mounted unit has optional foot-operated mechanism, and 6 and 12-circuit frames. General duty surface-mounted switch has oilless bronze bushings; is capable of 55-degree angular throw with five points in each direction; and has handle with off-position latch, auxiliary contact, or spring return. Frames with 6 and 12 circuits are offered. All three master switches are rated continuously at 15 amp, 600 v ac and have an inductive rating of 1 amp at 250 v dc. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

For more details circle NED-837 K7 on enclosed inquiry slip

POLISHING & GRINDING WHEELS
flanges permit flush sanding



Disposable flanges which lock coated abrasive leaves of these polishing and grinding wheels in place are bonded to the core. This construction makes unnecessary the removal of flanges when wheel change is required. Wheel is merely slipped on the spindle and tightened by means of cap nut. Flanges are recessed into the side of the wheel, and the end cap nut is also recessed, so that wheel can be used flush against a surface. Recessed flanges are available on all wheels from 6 through 10-in. diameter and on widths of 1½ in. and up. Three available adapter kits make it possible to fit these wheels on any portable tool or bench lathe. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Bush St., St. Paul 6, Minn.

For more details circle NED-838 K7 on enclosed inquiry slip

Diesel Engines

White Motor Co., White Diesel Engine Div.—Four-cycle, six or eight cylinder, in-line diesel engines ranging in ratings from 530 to 2000 hp and 300 to 1250 kw are described in 12-page bulletin 110. They can be furnished to run as diesel, dual, or gas engines.

For more details circle NED-839 K7 on enclosed inquiry slip

when you come to hardware take your case to:

J. H. SESSIONS & SON

Air Force and Signal Corps transit case hardware and Engineer Corps chest hardware to exact government specifications. Standard and special stampings and stamped assemblies in a wide range of finishes. Write for literature.

J. H. SESSIONS & SON
289 RIVERSIDE AVE., BRISTOL, CONN.

For more details circle NED-840 K7 on enclosed inquiry slip

BREAK DOWNTIME BOTTLENECKS with this complete tool set

Snap-on 5164-GS-B TOOL SET

Here's a timesaving kit of *Snap-on* tools to handle hundreds of shop maintenance jobs. Mechanics like its space-saving compactness. You'll like its timesaving completeness. The 164 tools in the all-metal carrying case are basic for everyday maintenance operations. It's an excellent selection for on-the-job servicing of factory machinery, gasoline or diesel engines, material handling equipment, cars and trucks, plant utilities.

Many other kits and tools are available. Your *Snap-on* man can give you specialized tool service and recommend the best tools for your needs. Write us or call your nearest *Snap-on* Branch.

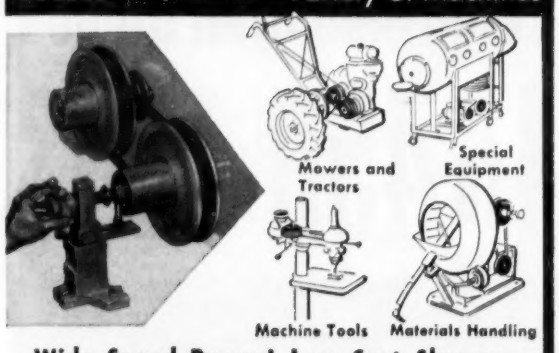
*Snap-on is the trademark of Snap-on Tools Corporation.

Snap-on Tools FOR ALL INDUSTRY

SNAP-ON TOOLS CORPORATION
8110-J 28th Avenue • Kenosha, Wisconsin

For more details circle NED-841 K7 on enclosed inquiry slip

SPEED SELECTOR VARIABLE PITCH SHEAVES
Control Speeds on Variety of Machines



Wide Speed Range! Low Cost Sheaves

Speed Selector Sheaves can give your machines or equipment extra wide-range speed control on fixed centers. Efficient, rugged, simple to use — low in cost! Write for Illustrated Bulletin.

CATALOG FREE! WRITE TODAY

SPEED SELECTOR INC.
P.O. BOX 312-N • CHAGRIN FALLS, OHIO

For more details circle NED-842 K7 on enclosed inquiry slip

QUICK! CALL THE DELUXE DEALER
WE HAVE A SHELVING PROBLEM

Your shelving problems can't be this preposterous, but if you want to talk about them with an expert, call your Deluxe dealer. He will engineer efficient, flexible shelving installations and supply you with additional shelving racks as fast as you need them!

These features mean lowest cost installation for you
- Rigid, fast erecting bin-type uprights
- Boltless, adjustable shelf brackets
- Snap-in dividers for quick flexibility
- Factory-reinforced shelves
- Coped shelf corners for more capacity

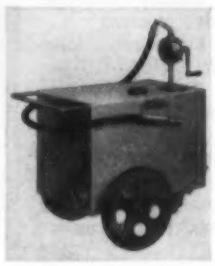
Call your local dealer or write for "Shelving Reference Manual"

DELUXE METAL FURNITURE CO.
WARREN, PA.
A Division of Royal Metal Mfg. Co.

DELUXE

For more details circle NED-843 K7 on enclosed inquiry slip

PORTABLE WHEEL TANK
has dual suction and dispensing pump



Portable tank transports industrial cuttings oils from storage tanks to machinery and used oils from machinery to the reclaiming or filtering unit. A reverse suction rotary pump enables drawing of the liquid into tank by turning the crank handle to the left and discharging the liquid when turning to the right. Two strainers are used, one at the hose end to prevent chips from entering the tank and the other is located at extreme bottom of the suction pipe to prevent any foreign matter from entering the pump. Tank is 65-gallon capacity, durably constructed and leakproof. The fill opening is fitted with a vented plug for quick, rapid filling. Hose and wheels are made of synthetic rubber for durability and easier transportation of tank from place to place. Steel wheels available when desired. A clean-out opening enables quick removal of any foreign matter from inside the tank. Its use encourages frequent changes of cutting oils, thus increasing life and efficiency of the machine tool. **FOR FREE FOLDER WRITE BOWSER, INC., 1381 E. CREIGHTON AVE., FORT WAYNE, INDIANA.**

▲ For more details circle NED-844 K7 on enclosed inquiry slip ▲

ALPHA TWO POINT BACK GEAR UNDER DRIVE PRODUCTION PRESSES capacity of 75 to 200 tons

These precision presses are basically precision operating, high-speed automatic stamping presses.

NO PITS REQUIRED.

UNBALANCED DIES can be handled without distortion.

FAST, ACCURATE, WILL GIVE LONG TROUBLE-FREE SERVICE and LONG DIE LIFE.

PRESSES UP TO 300 TON CAPACITY, AVAILABLE TO CUSTOMER PARTICULAR REQUIREMENTS.

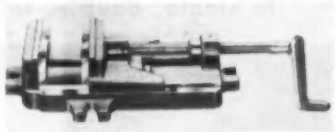
Outstanding Features
- Shut Height Adjustment in Head.
- Center Drive Type Herringbone Gears.
- Scrap Cutter Action on Up-Stroke of Press.
- Cam Adjustments for Brake & Roll Feeds.
- Micro Adjustment of Metal Travel.
- Timing of Scrap Cutter from 0° to 45° of Up-Stroke of Press.
- Positive Shut Height Lock.
- Bronze Sleeve Bearings Replace Gibs as Utilized on Conventional Presses.

Write for Catalog

ALPHA PRESS & MACHINE, INC.
9281 FREELAND AVENUE • DETROIT 28, MICHIGAN

▲ For more details circle NED-845 K7 on enclosed inquiry slip ▲

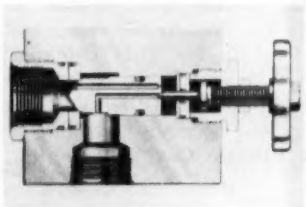
VISES
for drill presses, milling machines



Interchangeability of parts from one vise to another of the same size is a feature of a series of four drill press and milling machine vises. Offered with plain or steel jaw faces, each vise has a vertical slot for holding rounds. Base slots extend toward the front jaw to prevent damage from vertical drilling. Swivel crank handle drops down, out of the way, when not in use. Four 11/16-in. keyslots are spaced at right angles for location on press or machine. Vises have 3½ and 5-in. jaw widths; 1⅞ and 2-in. jaw depths; and 4½, 3¾, 6, and 6⅞-in. jaw openings. Made by **Columbian Vise & Mfg. Co.,** 9023 Bessemer Ave., Cleveland 4, Ohio.

▲ For more details circle NED-847 K7 on enclosed inquiry slip ▲

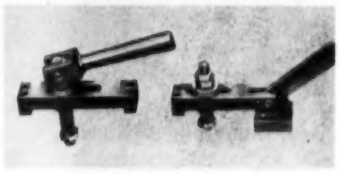
THROTTLING VALVE
5000-psi unit has pilot needle valve



All flow regulation by the Throttle-Flo throttling valve is through a pilot needle valve which controls a large dynamically balanced piston. The pilot valve can be turned with the finger tips because of the small area under pressure and the large fine-pitch thread. Suited for pressures up to 5000 psi, the valve's metering is accurate to 1/100 gpm over its entire range. The 1-in. size unit has an aluminum body and stem, inserted seat, and piston of hardened stainless steel. Hydraulic oil seals are standard, with other types special. Standard AN adapters may be used to reduce port sizes. Made by **Republic Mfg. Co.,** Dept. N, 15655 Brookpark Rd., Cleveland 11, Ohio.

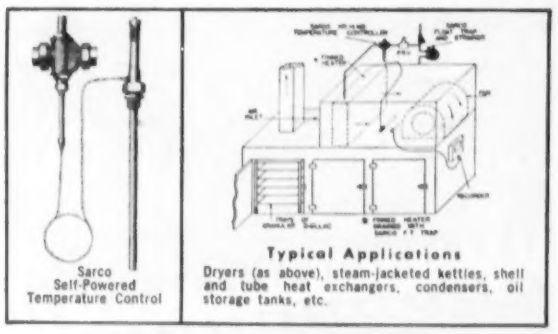
▲ For more details circle NED-848 K7 on enclosed inquiry slip ▲

STRAP CLAMPS
with interchangeable pads



Rough, finished, and irregular surfaced work can be securely held by these strap clamping assemblies which feature a universal type maneuverable strap and five interchangeable pads of soft stock. Pads can be machined for perfect fit on any shape of work surface and offer downward pressure at all times. They are attached to the strap by two screws. Brass or bronze pads can be used for extra soft work. Wide variety of clamp sizes is offered. Made by **Jergens Tool Specialty Co.,** Dept. NED, 712 E. 163rd St., Cleveland 10, Ohio.

▲ For more details circle NED-849 K7 on enclosed inquiry slip ▲



Sarco Self-Powered Temperature Control

Typical Applications
Dryers (as above), steam-jacketed kettles, shell and tube heat exchangers, condensers, oil storage tanks, etc.

End uncertain manual
TEMPERATURE CONTROL
. . . at low cost!

Here's how to get rid of uncertain, time-wasting manual temperature control . . . *throughout* your plant.

And without investing in complicated, costly equipment.

These SELF-POWERED Sarco controls are inexpensive, simple, dependable, accurate. Can be used for all but the few special jobs requiring costly, elaborate equipment. ½" size costs only about $100.

Self-powered . . . no electricity or compressed air needed. Self-contained. Packless. Simple—no gadgets. Easy to install by any pipefitter

Thousands in use by firms such as Colgate-Palmolive, Sinclair Refining, Swift.

Write for Bulletin 620 to Sarco Company, Inc., Empire State Bldg., N. Y. 1, N. Y.

SARCO 2237-F

For Steam Traps, see Sarco ad, page 87.

▲ For more details circle NED-850 K7 on enclosed inquiry slip ▲

CALCULAGRAPH furnishes accurate cost data *Automatically*

Take the guesswork out of your production costs with a dependable, economical Calculagraph system — a system that gives you accurate time costs automatically.

What's more, many workers can record starting and finishing time on the same Calculagraph and the ELAPSED WORKING TIME for each is computed on your job cards — to the minute or tenth of an hour.

Investigate, install Calculagraph now and know your exact time costs.

Write for illustrated brochure to Dept. NE

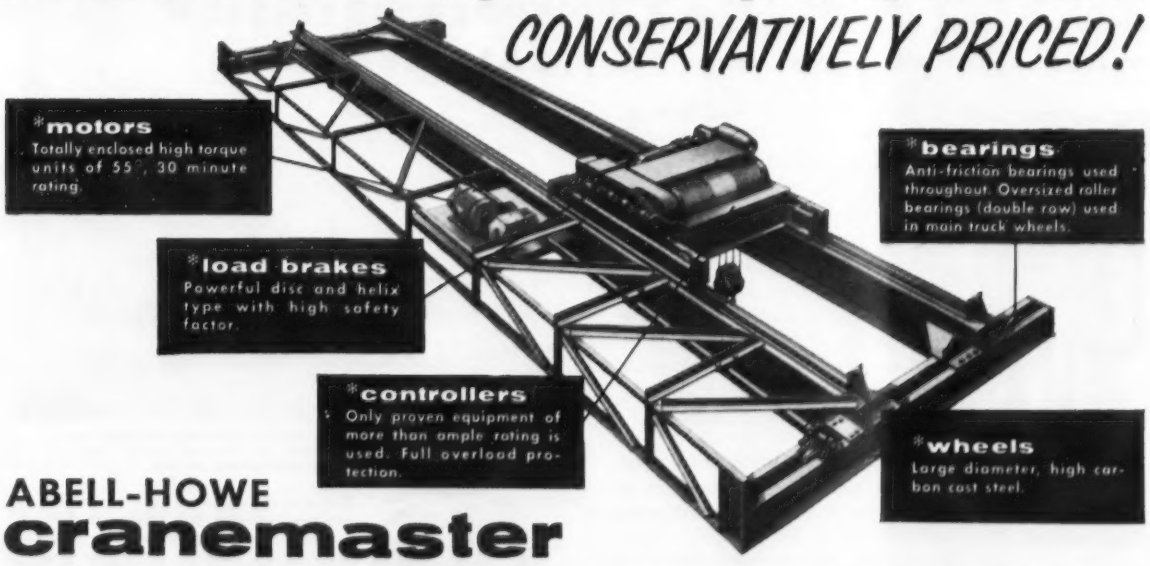
Agents in Principal Cities.

CALCULAGRAPH Company
HARRISON, N. J.

DEPENDABLE ELAPSED TIME COMPUTERS SINCE 1892

▲ For more details circle NED-851 K7 on enclosed inquiry slip ▲

no crane of comparable quality is more *CONSERVATIVELY PRICED!*



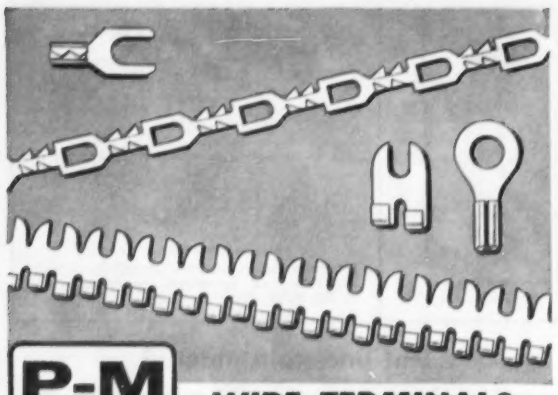
ABELL-HOWE cranemaster

*In any crane, these are the parts that handle the heavy work . . . the parts that *must be* top quality if you're looking for crane *dependability*. Compare Cranemaster engineering at these critical points with any industrial shop crane. Then compare prices. Time and time again Abell-Howe proves it has the top value in overhead traveling cranes...in capacities to 20 tons—spans to 60 feet.

Send for **BULLETIN C-114**

7747 Van Buren Street ABELL-HOWE COMPANY Forest Park, Illinois

▲ For more details circle NED-846 K7 on enclosed inquiry slip ▲



P-M WIRE TERMINALS

loose . . . or continuous strip

Quick delivery from thousands of types in stock . . . or produced to your specifications.

Either way, P-M is your best buy in quality electric wire terminals. Our experienced staff of engineers is backed by modern expanded factory facilities. The result is a top team in the terminal league.

WRITE FOR CATALOG

P-M PATTON-MacGUYER COMPANY
10 Virginia Ave., Providence 5, R. I.

For more details circle NED-852 K7 on enclosed inquiry slip

FACTORY CLEANING Costs less With AMERICAN Vac-King

Speed Dry Work!
EXTERNAL BAG VACS

All sizes—engineered to do your dry work fast! Clean floors, furnaces, ducts, ceilings, radiators, stock rooms, many other factory jobs. Powered by 1 to 1½ HP motors. 9, 12 and 55-gallon models with detachable head.

Automatic Floor
SCRUBBER-VACUUM

With a Lincoln Auto-Scrubber you can do five jobs: spread solution, scrub, rinse, pick-up and dry floors in a *single automatic operation!* 5 sizes for every type of floor, from 2,000 to 1,000,000 sq. ft. or more! Available electric, gasoline, liquid propane, explosion-proof

Portable BLOWER

Detach Vac head from any Vac-King, external bag type, add nozzle and you have a powerful *Blower* to clean work benches, machinery, equipment! Also, use as portable *Vac* to keep shelves, bins, etc., free of dust and dirt.

WET OR DRY PICK-UP

American King Size Vacuum does speedy wet or dry pick-up, plus other factory cleaning. Vac head and dolly fit any 55-gallon drum. Powerful 1 or 1½ HP motor. Converts to heavy duty portable blower unit.

SOLD THROUGH SANITARY SUPPLY DEALERS
FOR BUYING FACTS WRITE

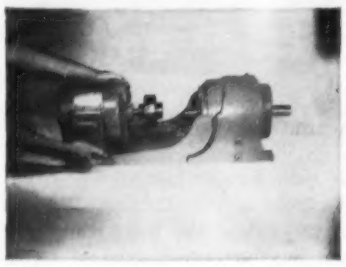
AMERICAN® FLOOR MACHINE CO. ESTABLISHED 1903

Performance Proved Maintenance Machines World-Wide Sales and Service

a division of American-Lincoln Corporation
524 So. St. Clair St. • Toledo 3, Ohio

For more details circle NED-853 K7 on enclosed inquiry slip

GEARMOTORS
integral and separate types offered in single, double, triple reductions



Line of integral horsepower gearmotors and related transmissions is available in three basic components: integral unit with gears and drive motor packaged into a single unit; all-motor type with drive motor coupled to gear reducer and mounted on a common carrier; and separate helical speed reducer for use with various prime movers. Mounting dimensions on all three components are identical for similar ratings and parts are interchangeable.

Ratio changes are made through a change of pinion and gear in the first stage only. Gear housing is accessible from either end. Three basic types of speed reductions are offered: Single reduction, offset shaft, in speed ranges from 780 to 350 rpm; double reduction, concentric shafts for 350 to 37 rpm; and triple reduction, concentric shaft, for 30 to 13.5 rpm. Integral type gearmotors will be offered in 1 to 30 hp with 1 to 10 hp now available. Other units in line with ratings to 75 hp will be made available in 1958. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

For more details circle NED-854 K7 on enclosed inquiry slip

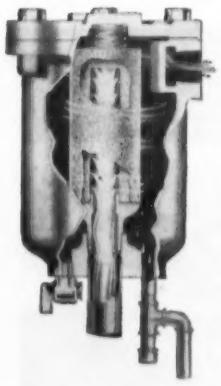
ULTRASONIC CLEANING GENERATOR
for tank or immersion transducers

Designed for use with tank type or welded stainless steel immersible transducers, this model AP-25-B ultrasonic Sonogen generator is rated 125 w average

output, with peak power pulses to 500 w. It is adaptable for unattended and fast cleaning of small parts such as watch mechanisms, instruments, bearings, and components. For cleaning and rinsing, or other two-step operations, the generator output can be switched from one transducer to another mounted in separate tanks. Illustrated companion tank unit measures 6½ x 8 x 10 in. and has an effective cleaning area of 52 sq in. Made by **Branson Ultrasonic Corp.**, Dept. NED, 40 Brown House Rd., Stamford, Conn.

For more details circle NED-855 K7 on enclosed inquiry slip

ADAMS PORO-STONE AIR FILTER,
designed to remove oil, water and foreign matter from compressed air lines with minimum pressure drop.



The R. P. Adams Poro-Stone air filter is engineered to efficiently remove entrained oil, water and pipe scale from compressed air lines. Liquid droplets and solids being carried by the gas stream are first removed by centrifugal action in an annular chamber. Secondary filtration is achieved by passing the air or gas stream through a poro-stone unit. An automatic trap can be provided to discharge the residue from the cyclone chamber.

At rated capacity the filters operate at a maximum pressure drop of only ½ lb., thus insuring delivery of line pressure to the point of consumption.

The units require virtually no service or maintenance—thereby insuring continued trouble-free, low cost performance.

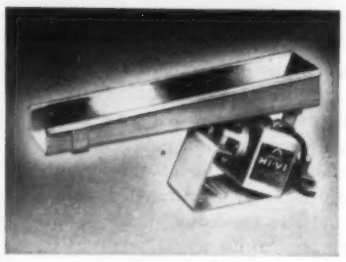
ADAMS Poro-Stone air filters are available from stock in sizes to suit your needs. For further information, write today for Bulletin 117, R. P. Adams Co., Inc., 227, East Park Drive, Buffalo 17, New York. *(Advt.)*

For more details circle NED-856 K7 on enclosed inquiry slip

NEW HI-VI VIBRATORY FEEDER BY ERIEZ OFFERS MANY ADVANCED FEATURES!

- **Totally - enclosed drive element**
- **Rustproof, long-life spring**
- **No rectifier needed**
- **More uniform feed**
- **Greater capacity than comparable physical size units**

(Pat. Pending)



Improved line of HI-VI electro-permanent magnetic vibratory feeders operate at 3600 CPM directly off an AC line—need no rectifier. Totally-enclosed drive element can't be damaged or lose efficiency due to contamination by moisture or foreign materials. Disc-shaped, glass fiber springs are rustproof; not subject to critical characteristics of steel leaf spring systems. And these new units provide greater capacity than any other comparable size feeders.

HI-VI Feeders provide a liquid-like flow to all types of bulk materials, variable from ounces to tons per hour. Units are lightweight, compact, easily installed. Almost silent operation; no sliding or rotating parts to wear. Low operating and maintenance costs. Lifetime-powered Alnico V magnet is the heart of the unit.

ERIEZ HI-VI VIBRATORY EQUIPMENT

Magnetic SEPARATION AUTOMATION VIBRATION equipment

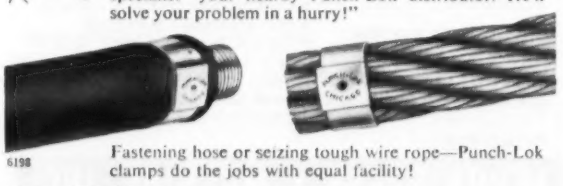
For complete information on HI-VI Feeders, write to **Eriez Mfg. Co.**, 80XV Magnet Dr., Erie, Pa.

For more details circle NED-857 K7 on enclosed inquiry slip

Fascinating!

SHIMMY and SHAKE
once you choose it—you won't loose it!
PUNCH-LOK HOSE CLAMPS

"Got vibration problems?" asks Doc Punch. "Call in a specialist—your nearby Punch-Lok distributor. He'll solve your problem in a hurry!"



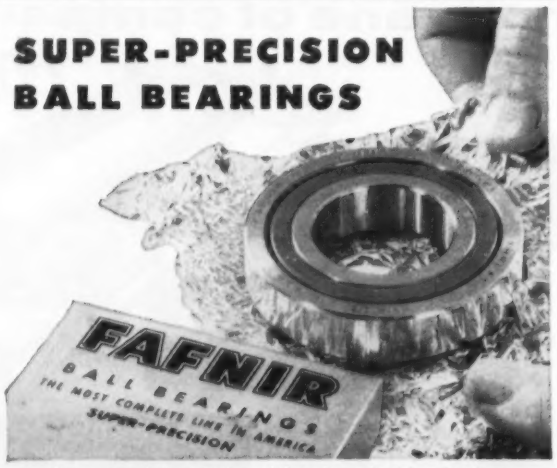
6198

Fastening hose or seizing tough wire rope—Punch-Lok clamps do the jobs with equal facility!

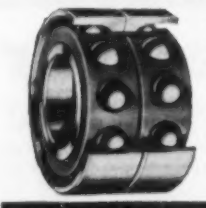
PUNCH-LOK Company Dept. A, 321 N. Justine St., Chicago 7, Ill.

For more details circle NED-858 K7 on enclosed inquiry slip

SUPER-PRECISION BALL BEARINGS



For unexcelled protection, Fafnir Super-Precision Bearings are wrapped in aluminum foil. To command special care in handling, they're packed in gold-colored cartons.



For applications requiring high speeds, extreme accuracy and rigidity in such equipment as high grade machine tools, woodworking machines, jet engines, sensitive precision instruments etc., Fafnir manufactures a complete line of bearings in extra-precision tolerances. For details write the Fafnir Bearing Company, New Britain, Connecticut.

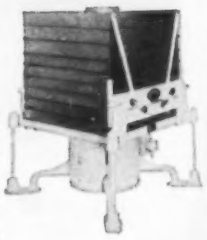
FAFNIR BALL BEARINGS MOST COMPLETE LINE IN AMERICA

For more details circle NED-859 K7 on enclosed inquiry slip

Sifts huge volumes with Big Savings in Floor Space

RICHMOND SPROUT-WALDRON

Gyro-Whip SIFTER



Noted for huge output, amazingly compact design, and sanitary operation, these sifters are available in sizes ranging from 3-sieve, floor-mounted models to free-swinging super-sifters with 180 sieves. Stainless steel and wood construction. Can sift from 2 mesh up to 325 mesh. They handle any product that can be mechanically separated. Aspirator tips to air wash graded products can be provided.

Write for Bulletin 135-A

Other Sprout-Waldron size classification equipment includes revolving reels, shaking and gyrating screens, air and magnetic separators, and graders. Write for details.

SPROUT-WALDRON
Manufacturing Engineers Since 1866
8 LOGAN STREET • MUNCY, PA.
EQUIPMENT FOR SIZE REDUCTION—MIXING & BLENDING — BULK MATERIALS HANDLING — PELLETING & CUBING — PRODUCT CLASSIFICATION

IN/502

For more details circle NED-860 K7 on enclosed inquiry slip

...cut the cost of doing business

use

FERGUSON CONVEYORS

Costs take a downward turn when FERGUSON gravity and power conveyors do the material handling in production, inspection, packaging and shipping departments. That's because these conveyors release labor for more productive jobs . . . eliminate plant-wide congestion . . . and overcome the kind of delays that cost money.

The experience of our customers proves all these claims. For the same kind of experience, install FERGUSON conveyors in your plant. You'll like their convenience and economy.

Write, wire or call.

HARRY J. Ferguson COMPANY
129 WEST AVENUE
JENKINTOWN, PA.
TUrner 4-4401

For more details circle NED-861 K7 on enclosed inquiry slip

WIDE-ANGLE SPEAKER can be swiveled 360 degrees

Wide-angle model CLH public address projector type speaker has an omni - directional swivel mounting that enables its bell to be rotated 360 degrees on its axis. The positive lock, serrated, swivel U-mounting bracket will also link two or more projectors into any configuration. An exact sound distribution pattern can be achieved, including diagonal and alternating patterns. Unit will cover "dead spots" and control echo and reverberation. Price is $44.50. Made by **University Loudspeakers, Inc.**, 80 S. Kensico Ave., White Plains, N. Y.

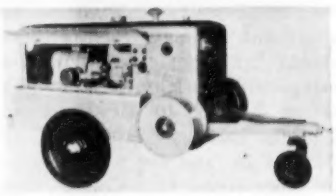
For more details circle NED-863 K7 on enclosed inquiry slip

SPRING COILER produces 300-400 springs per hour

Accurate compression, extension and torsion springs can be produced from music wire, stainless, Inconel, phosphor bronze, and all other spring materials with this hand-operated spring coiler. Unit is useful in small shops or tool rooms for making up experimental lots and small production runs of up to 1000 springs. Using 1/64 to 5/32-in. diameter wire, 300 to 400 springs measuring 3/16 to 2 in. OD, with lengths from ¼ to 10 in. can be coiled per hour. Made by **Carlson Co.**, 3459 Weidner Ave., Oceanside, L. I., N. Y.

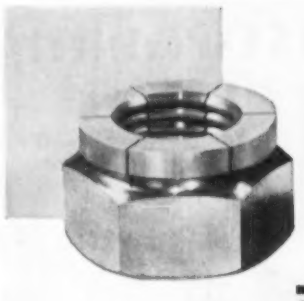
For more details circle NED-864 K7 on enclosed inquiry slip

ROTARY COMPRESSOR multistage unit rated 125 cfm



This multistage Hydrovane rotary compressor has a single free-floating rotor. Volumetric efficiencies up to 92 per cent are claimed for the unit which is rated 125 cfm. Cooling oil injected by means of two multistage injection chambers produces continuous cooling that lowers air discharge temperatures considerably. Features include primary and secondary intake air cleaners, three-stage oil separator, and single adjustment vacuum-hydraulic, supply-demand control. Units are available in two-wheel trailer and skid mountings. Made by **Davey Compressor Co.**, Myers Ave., Kent, Ohio.

For more details circle NED-865 K7 on enclosed inquiry slip



specify standard FLEXLOC

SELF-LOCKING NUTS

FLEXLOC DESIGN FEATURES
- one-piece, all-metal construction
- resilient locking section
- controlled locking torques
- lock and stop nut in one
- every thread carries its full share of load

DO YOU KNOW? Standard FLEXLOCS improve the finish of rough bolts. They smooth off rough threads. And the locking threads on all-metal FLEXLOCS are not chewed up when used on rough bolts. FLEXLOCS are stocked by authorized industrial distributors in a full range of sizes from #0 to 2". Write for Bulletin 866. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
FLEXLOC LOCKNUT DIVISION SPS
JENKINTOWN PENNSYLVANIA

For more details circle NED-866 K7 on enclosed inquiry slip

MADE FOR ROUGH AND TOUGH SERVICE . . .

SURETY TRIPL-PALM

Putting the wear in gloves at the right point really makes a big improvement in service — and makes important reductions in glove costs. Tripl-Palms are built tough for rough use yet provide thorough hand comfort. Available in knit wrist and gauntlet styles with coated or "free-breathing" backs.

Use this Free Offer to Prove Tripl-Palm's Longer Wearing Life

TEST FOR YOURSELF AT OUR EXPENSE— Tell us about your requirements (specific material to which gloves are subjected) and we'll send you a pair of Sureseals for your own test.

THE SURETY RUBBER CO., Carrollton, Ohio — CLIP COUPON AND MAIL TODAY

Gentlemen:
We'll test Tripl-Palms. Send complete information promptly.
Dept. N

Your Name _____
Company Name _____
Address _____
City _____ State _____
Gloves are used for (name type of job) _____
Your Glove Jobber's name _____

For more details circle NED-867 K7 on enclosed inquiry slip

NEW Cyclo-trell Dust Collector

Here are a few brief facts on Research's new multiple tube mechanical collector. • Collection efficiencies are higher, for a given pressure drop, than other conventional multiple tube collectors. • Gas flow per tube is higher than conventional units. This means fewer tubes per collector and lower total cost for a given capacity.

Higher Collection Efficiency

After testing many types and curvatures of vanes, Research found that this new aerodynamic design resulted in less turbulence, greater centrifugal force and higher collection efficiencies.

Greater Gas Handling Capacity

To develop a higher gas flow capacity than other multiple tube collectors, Research's engineers developed the following design features:

First, by using a 10" diameter inlet tube, instead of the conventional 9" tube, the flow of incoming gas was increased. The next step was to straighten the gas flow as it entered the outlet tube, since a spiraling gas stream creates more resistance than a straight through flow. In the Cyclo-trell this spiral is eliminated, and energy is recovered in the outlet tube by the Outlet Recovery Vanes. By positioning these vanes below the tube, rather than inside the tube, resistance has been further reduced.

This combination of features means greater gas flow per tube, fewer tubes per collector and a lower total cost for a given capacity and efficiency.

Bulletin M gives complete details on design features, efficiency, capacity and detailed dimensional drawings. Write for your copy today.

Research-Cottrell, Inc.

Main Office and Plant: Bound Brook, N. J. • 405 Lexington Ave., New York 17, N. Y. • Grant Building, Pittsburgh 19, Pa. • 228 North La Salle St., Chicago 1, Ill. • 111 Sutter Bldg., San Francisco 4, Cal.

RC 170

For more details circle NED-862 K7 on enclosed inquiry slip

STOP NOISE-Positively

with BURGESS-MANNING SNUBBERS

They are engineered to your requirements with GUARANTEED results.

They are available together with spark arresting—water separating—or, heat recovery. They provide noteworthy savings thru no maintenance, as well as greater equipment efficiency and effectiveness. Also, consider Burgess-Manning Snubbers for your Intake Silencing Requirements.

Present your problems for Recommendations.

BURGESS-MANNING COMPANY

Sound Engineering 755 East Park Avenue, Libertyville, Illinois

Dallas, Texas

▲ For more details circle NED-868 K7 on enclosed inquiry slip ▲

ROCKWELL-BUILT

DELTA cut-off machines

. . . insure accuracy *and* speed in custom aluminum fabricating

for U. S. C. Manufacturing Co., Valley Stream, N. Y.

SMOOTH MITER CUTS—According to Jack Goldman, President, smooth, accurate cuts are 9/10ths of the job in making high quality aluminum combination storm and screen doors and windows. And with Delta machines, every cut is a good one.

HIGH PRODUCTION CAPACITY—Adaptability to special set-ups gives the Delta cut-off machines high capacity for production output—and no special skill is required to operate them. Mr. Goldman points out that every man in his shop can make "expert" cuts on the Delta machines.

LOW MAINTENANCE COSTS—Except for blade and belt replacements, Mr. Goldman says, the Delta cut-off machines at U.S.C. require no servicing—and they carry continuous, heavy work loads.

GET ALL THE FACTS—Compare for quality, precision and value—your Delta Dealer is listed under "TOOLS" in the Yellow Pages of your phone book.

DELTA ROCKWELL — another product by ROCKWELL

SEND FOR ALL THE FACTS TODAY!

Delta Power Tool Division, Rockwell Manufacturing Co.
626K N. Lexington Ave., Pittsburgh 8, Pa.

☐ Please send catalog on entire Delta Cut-Off Machine line.
☐ Please send booklet: Delta Power Tools Teamed with Machine Tools.
☐ Please send names of my nearest Delta Dealers.

Name _____ Title _____
Company _____
Address _____
City _____ County _____ State _____

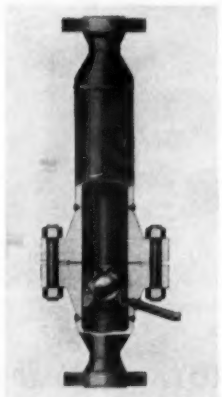
▲ For more details circle NED-869 K7 on enclosed inquiry slip ▲

ELECTRIC HAND SAW
performs work of seven saw types

Hard and soft woods, plywood, laminated plastics, compositions, and ferrous and nonferrous metals can be cut by the model 152 electric hand saw. It does the work of rip, cross cut, coping, key hole, scroll, jig, and hack saws. Orbital action of the blade keeps the teeth in contact only on the up or cutting stroke. Saw will cut 2-in. dressed wood, ¼-in. aluminum and ⅛-in. steel. Inside cuts are made without starting holes. Other features are on-off slide switch at thumb position, blower system to keep line of cut free of sawdust, 3 x 6-in. base, and motor with cutting speed of 4300 strokes per minute. Optional kit contains rip guide, angle adjusting base, assortment of blades, and other items. Made by **Porter-Cable Machine Co.**, 116 Exchange St., Syracuse 8, N. Y.

▲ For more details circle NED-870 K7 on enclosed inquiry slip ▲

DESUPERHEATER
reduces steam heat and holds temperature to within ±5° F



Tests over load ranges as wide as 50-to-1 show that this variable - orifice desuperheater reduces superheated steam temperature and holds it constant to meet rigid demands only 20 ft downstream from outlet. Unit consists of steel pipe section enclosing a self-regulating orifice extending around 360 degrees and a weighted ball held in concentric position by Inconel springs.

Valve-controlled cooling water enters orifice chamber around the 360-degree periphery, the point of highest pressure drop. High turbulence results, with instant and intimate mixing of cooling water into the steam for complete vaporization. Unit holds final temperature within ±5° F. Final temperature can be as low as 10° F above saturation temperature. The desuperheater is available for pipe line sizes from 2 to 14 in. and for pressures up to 2500 psi. Made by **Blaw-Knox Co.**, Copes-Vulcan Div., 941 W. 26th St., Erie 4, Pa.

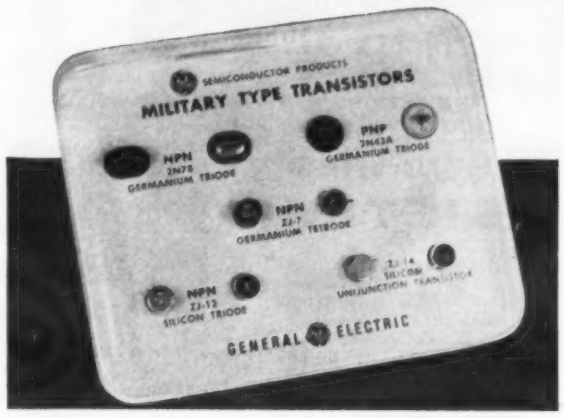
▲ For more details circle NED-871 K7 on enclosed inquiry slip ▲

Automatic Packaged Boiler

Orr & Sembower, Inc.—24-page illustrated bulletin 1245 is descriptive of Powermaster packaged automatic boilers in sizes ranging from 40 to 500 hp. Oil, gas, or combination fuel burners are offered in these compact steam generators.

▲ For more details circle NED-872 K7 on enclosed inquiry slip ▲

SMALL and FRAGILE PARTS....



These G.E. transistors encased in a Lite-TUFF box are easily handled and displayed, yet completely protected.

A Lite-TUFF box may solve the problem of sales visibility plus *rugged* protection for you.

Full information and Plot Plan Sheets sent upon request.

SHOE FORM CO. INC.
Dept. B-20, Auburn, New York

▲ For more details circle NED-874 K7 on enclosed inquiry slip ▲

A router is just as good as the motor that makes it go

No. R5B

Stanley Routers are the most versatile woodworking tools on the market for every job from the simplest basic routing operations to heavy duty production work. One important reason why Stanley Routers maintain consistently high performance records on the job is the Stanley-built motor.

This router is built for continuous production high-speed routing, and its motor unit can do double duty as the power plant for shaper, plane and other tools.

Your industrial distributor will demonstrate the capability of Stanley routers and their motor units. Write for Catalog E136.

Stanley Electric Tools
Division of The Stanley Works
New Britain, Conn.

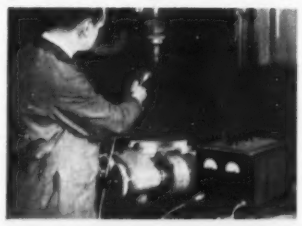
STANLEY

▲ For more details circle NED-875 K7 on enclosed inquiry slip ▲

ANNOUNCING A NEW *IRD system* TO REDUCE COSTS ON MACHINERY MAINTENANCE AND QUALITY CONTROL

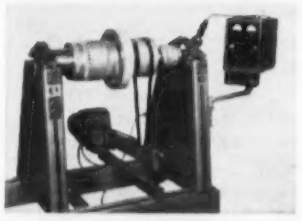
Bearing failure, fatigue, chatter, vibration, wear, noise eliminated with new multi-purpose IRD system, like this—

1. CHECKING — Machinery such as this jig borer can be inspected with the new IRD Model 305 Portable Vibration Meter for an acceptable or excessive vibration level — the key to its efficient operating condition. Once the portable (24-oz. weight) Model 305 establishes the presence of vibration . . .



2. TROUBLESHOOTING is continued with a Vibration Analyzer and portable balancer such as the Model 400 above. Cause of machinery vibration — unbalance, misalignment, bearings, belts, etc. — is pinpointed and correction is made on the spot — without costly trial and error dismantling of machinery. When vibration is caused by unbalance, the analyzer is used for . . .

3. IN-PLACE BALANCING— without costly dismantling, anywhere in your plant. The analyzer presents the location and amount of correction required on the faulty part as it rotates in its own bearing at operating speed. When it is required to balance disassembled components . . .



4. DYNAMIC BALANCING is performed as pictured with the multi-purpose IRD Model 102. Any one of 12 models of IRD Vibration Analyzers can be used with the Models 101, 102 and 103 Balancing Systems, depending on application. Vibration Analyzer, or electronic brain of the Balancing System is easily detached for both troubleshooting and in-place balancing.

No matter what your product or process, wherever a wheel turns — you can obtain a cost-saving dimension of production efficiency and product quality you may now think impossible. Write today for new bulletin 102 — or if you prefer we'll gladly have a sales engineer give an in-your-plant demonstration of the IRD system.

IRD system

International Research & Development Corp.
807 Thomas Lane, Columbus, Ohio

▲ For more details circle NED-873 K7 on enclosed inquiry slip ▲

Efficient hoists for welders and fabricators...

Compact, popularly priced Model 55 Hoists are conveniently installed—economically maintained. Gearing is of rugged, simplified design—lubrication is permanent. Two automatic brakes hold the load securely. Speeds available to suit the need. Capacities ¼ to 2 tons. Consult your dealer for complete data or write to us for catalog.

DR Model 55

cable type

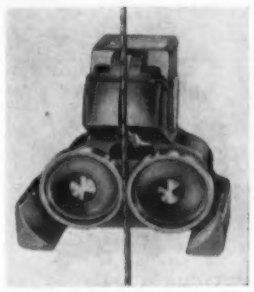
Electric Hoists

David Round and Son, Inc.

P. O. BOX 883 · CLEVELAND 22, OHIO

For more details circle NED-876 K7 on enclosed inquiry slip

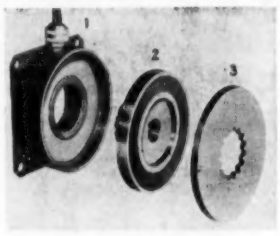
BANDSAW GUIDE
for saws cutting any material



Blade speeds up to 15,000 fpm are handled by the Guidall 400 bandsaw guide for cutting any material. Edge of blade rides on the outside perimeter of the thrust wheel, and thrust wheel and support rollers operate on the inner bearing raceway. Guide will handle thrust loads to 175 lb at maximum speed and 500 lb at lower speeds. From 3/16 to 2½-in. blades can be accommodated. Support blocks instead of rollers can be supplied where a blade wiping action is required. Made by **Carter Products Co.**, 421-A Wm. Alden Smith Bldg., Grand Rapids 2, Mich.

For more details circle NED-878 K7 on enclosed inquiry slip

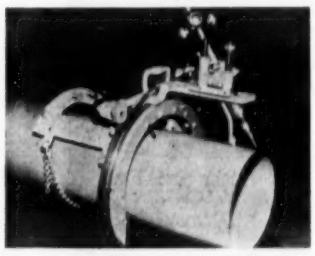
STATIONARY MAGNET CLUTCH
torques from 25 oz-in. to 170 lb-in.



Magnet body (1), drive member (2), and driven member (3) are the main parts of this stationary magnetic clutch, made in diameters from 1⅜ to 5 in. Torques range from 25 oz-in. to 170 lb-in. Maximum ratings range from 28 v dc on smaller units to 90 v dc on largest sizes. Stationary magnet eliminates need for collector rings. Clutches are adaptable to machine tools, computers, and motion picture cameras. Made by **Stearns Electric Corp.**, Dept. A, 120 N. Broadway, Milwaukee 2, Wis.

For more details circle NED-879 K7 on enclosed inquiry slip

OUT-OF-ROUND ATTACHMENT
for torch pipe cutter and beveler



Problem of inaccurate cuts or bevels on out-of-round or imperfect pipe is eliminated with the Out-of-Round attachment for company's standard torch pipe cutting and beveling machines. Roller rod assembly consists of a rod that is fastened to the body of the attachment by a set screw and a small diameter wheel that is affixed to the end of the rod, which travels the pipe's outer circumference. Through action of a spring, constant pressure is applied to roller rod, which forces wheel to follow pipe contour. This maintains cutting torch equidistant from pipe at all times. Made by **H & M Pipe Cutting & Beveling Machine Co.**, 309 E. Third St., Tulsa, Okla.

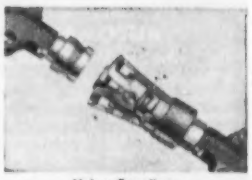
For more details circle NED-880 K7 on enclosed inquiry slip

EXTRA HEAVY locking, safety type quickly detachable

Valve Coupling Locked in "On" Position

VALVE COUPLINGS

give the operator complete control of the air line at any point


Valve Coupling Unlocked and Disconnected

Operator can shut off air and change tools quickly. Newly improved design permits the coupling to be locked in either "On" or "Off and Exhaust" position. Air in tool is exhausted to atmosphere automatically, preventing accidents. Pressure tight leak-proof construction — but free swiveling to avoid kinking the hose. For any application involving line air to 250 psi.

Valve Coupling Locked in "Off and Exhaust" Position

Write for Bulletin No. 551

Quick-As-Wink®

Air and Hydraulic Control Valves and Pressure Specialties

C. B. HUNT & SON, INC.

2105 E. PERSHING ST. • SALEM, OHIO

For more details circle NED-882 K7 on enclosed inquiry slip

WHAT'S NEW IN MOTOR CONTROL?

NEW HIGHER NEMA RATINGS FOR SIZE 0 AND SIZE 1 STARTERS AND COMPONENTS

NEMA recently approved increased horsepower and ampere ratings for NEMA 0 and NEMA 1 sizes of A-c across-the-line starters and contactors. This is a new industry standard to allow savings in space and cost in the majority of control applications.

All starters and components in the Cutler-Hammer line of Three-Star Motor Control have been rerated to these new NEMA standards. Your nearby Authorized Cutler-Hammer Distributor *now* offers them from stock for non-reversing, reversing and multi-speed requirements. Revised Cutler-Hammer catalog sheets showing all forms of control units with the new NEMA ratings will be supplied on request. Write today.

Note: NEMA ratings have not been changed for special duty, plugging, inching, jogging, etc., or for tungsten lamp loads.

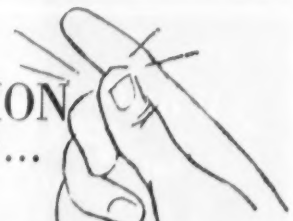
CUTLER-HAMMER, Inc., 1377 St. Paul Avenue, Milwaukee 1, Wisconsin. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto.

CUTLER-HAMMER ☆☆☆ MOTOR CONTROL C-H

GET IT FIRST IN CUTLER-HAMMER

For more details circle NED-877 K7 on enclosed inquiry slip

get SNAP-ACTION as you want it...



1 MOMENTARY CONTACT
(press to start—release to stop)

2 MAINTAINED CONTACT
(press to start—press to release)

LINEMASTER® CLIPPER

FOOT SWITCHES

Sizes: 4½" x 3½" x 1½" Weight: 2½ lbs.

WRITE TODAY for Bulletin and prices

Let us quote on your switch requirements.

Famous Momentary Contact Clipper has already proved itself in the field. New Maintained Contact Clipper gives you a long lasting switch for medium heavy duty applications. Molded nylon actuating cams for long life, no lubricating required. Rugged cast iron housings, sponge rubber skid pads. High electrical ratings.

LINEMASTER SWITCH CORP. 424 Woodstock Terrace Woodstock, Conn.

For more details circle NED-881 K7 on enclosed inquiry slip

ONLY ONE MOTOR DOES THE JOB BEST

Peerless has hundreds of motors—many designed for specific applications. These motors were job-engineered to get the utmost in efficiency from the machines they drive. Bring your motor problems to Peerless. Our engineers will work with you to produce the one motor that powers your product best.

ELECTRIC MOTOR DIVISION

THE Peerless® Electric COMPANY

FANS · BLOWERS · MOTORS · ELECTRONIC EQUIPMENT

1506 W. MARKET ST. • WARREN, OHIO

For more details circle NED-883 K7 on enclosed inquiry slip

Saginaw sets the pace for industrial casters

Saginaw

get all the facts about the casters that are engineered for modern material handling . . .

SAGINAW PRODUCTS CORPORATION
Saginaw 3, Michigan

53

PLEASE SEND ME YOUR NEW ENGINEERING MANUAL NO. C-56

NAME _____

COMPANY _____

ADDRESS _____

For more details circle NED-884 K7 on enclosed inquiry slip

GET AHEAD

Stay Ahead in Your SPRAY DECORATING with Conforming Matrix

Originators of efficient explosion-proof AUTOMATIC MASK WASHERS

• The fastest made • Increase production with fewer tools • Eliminate damage and costly repairs of masks • Lowest solvent consumption • High pressure, no-leak pump • Send prints or sample parts, giving production requirements and results you wish to achieve.

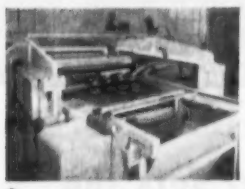
Manufacturers of all the equipment needed to equip you with the most practical system for handling your particular projects most efficiently. We maintain a trained engineering staff familiar with all types of materials, translucents, teflon and metallics, and with knowledge of die casting, stamping and plastic molding procedures as they relate to high production spray finishing.

Conforming Matrix CORPORATION
338 Toledo Factories Building
Toledo 2, Ohio

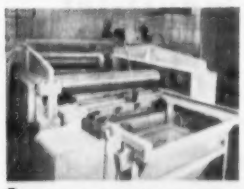
For more details circle NED-886 K7 on enclosed inquiry slip

load and trim molded Rubber goods AUTOMATICALLY with FEMCO Roller Die Cutter!

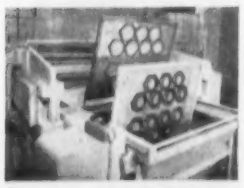
1. Steel Frame 36 x 34 Holds Dies



2. Moves Under Roller



3. Parts are Cut and



4. Drop to Tote Box

Equipped with AUTOMATIC loading device

This Automatic Loading equipment fits FEMCO Roller Die Models with bed sizes 48 x 42; 48 x 72; and 48 x 84. You can attach the equipment to each end of the larger models for continuous die cutting. Designed especially for high production trimming of molded rubber goods, small automotive rubber parts, toy tires and other small items.

This automatic operation saves all the handwork of removing die cut parts from the dies and stacking. All the operator does is load the frame, and after trimming, remove the "flash" or scrap.

Call or write for full details.

WRITE OR WIRE US TODAY!

SEND US MATERIALS FOR TRIAL CUTS and FULL REPORT, NO OBLIGATION

Perhaps you make other products and need accurate and fast multiple die cutting . . . if so, get the facts today about FEMCO'S Roller Die Machine.

The FALLS ENGINEERING AND MACHINE CO.
Established 1917
1734 FRONT ST., CUYAHOGA FALLS, O.

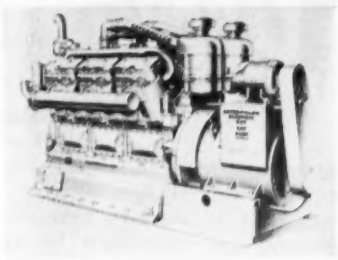
For more details circle NED-887 K7 on enclosed inquiry slip

PNEUMATIC-TIRED CASTERS
swivel and rigid types offered

The 10-in. semipneumatic or full pneumatic rubber-tired wheels available on line of matching swivel and rigid casters absorb shock when transporting fragile loads over uneven floors or rough ground. The 150-lb capacity semipneumatic type is punctureproof, never requires inflating, and is mounted on roller bearing aluminum alloy hub and rim. Pneumatic type with 450-lb capacity is mounted on roller bearing pressed steel rim and hub, and has inner tube and four-ply casing. Both types are demountable. Swivel type has two rows of ball bearings and proper fork lead for easy swivel action under heavy loads. Made by **Nutting Truck & Caster Co.**, 1201 W. Division St., Faribault, Minn.

For more details circle NED-888 K7 on enclosed inquiry slip

DIESEL ELECTRIC SET
250-kw unit generates 240, 480, or 2400 v at 1200 rpm



Offered with either the new SRCV Cat generator, or an optional two-bearing generator, the Cat D397 spark-ignition electric set is powered by a V-type diesel engine. Engine can be altered for fuel carburetion and magneto ignition system, allowing set to operate on methane, butane, propane, or field gases. Set is available with either 10:1 or 7.5:1 compression ratios. It may be easily converted for diesel operation, whenever necessary.

Top-mounted exciter and a single, heavy-duty bearing on the generator achieve compactness. A flexplate coupling to engine flywheel further eliminates a front bearing and simplifies alignment. The self-regulated, constant-voltage generator produces 60-cycle three-phase current at choice of 240, 480, or 2400 v at 1200 rpm. Voltage is adjustable from 5 per cent above to 10 per cent below nominal voltage. Air, direct electric, or gasoline engine starting systems are available. Made by **Caterpillar Tractor Co.**, Equipment Street, Peoria 8, Ill.

For more details circle NED-889 K7 on enclosed inquiry slip

Roller Chains & Sprockets

Diamond Chain Co.—68-page illustrated catalog 757 covers line of stock roller chain and sprockets. Selection of a roller chain drive, determining horsepower required and finding size of driven sprockets are among data presented.

For more details circle NED-890 K7 on enclosed inquiry slip

a World of new uses for PIPE IN INDUSTRY

. . . Get your free copy

HERE THEY ARE

NEW WAYS TO Save TIME . . . Lots of time MONEY MATERIAL

Now ordinary pipe can serve industry in unlimited new applications that will save you much time, money and materials. Production fixtures can be made fast with ordinary pipe. No welding, special materials or special tools. This big free book tells you how. Mail the coupon below for your free copy today.

MAIL THE COUPON TODAY

TUBE-STRUT CORP.
2960 Marsh Street
Los Angeles 39, Calif.

Rush your new book "New Uses for Pipe" to—

Name _____
Firm _____
Address _____
City _____ State _____ NED-1A

For more details circle NED-891 K7 on enclosed inquiry slip

Clean Surfaces Quickly With

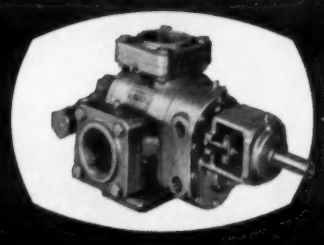
Pangborn Blast Cleaning Machine

Designed to deliver fast, economical blast cleaning, Pangborn Blast Cleaning Machines can be used for efficient maintenance of bridges, tanks, buildings, hulls, structural metal, sheets and plates. Removes scale, rust, paint and dirt; leaves "toothed" surface ready for painting. Stationary or portable types. For details, write to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md. *Mfgrs. of Blast Cleaning & Dust Control Equipment.*

Pangborn BLAST CLEANS CHEAPER

For more details circle NED-892 K7 on enclosed inquiry slip

NEW ROPER PUMP WITH STEAM CHEST



LOW COST METHOD OF HEAT TRANSFER TO PUMP AND PACKING

TWO TYPES OF CONSTRUCTION:
Spec. 3878 Fitted with Bronze Bearings
Spec. 4049 All Iron Construction
All Units Fitted with Aluminum Gaskets and High Temperature Packing

It's a rotary gear unit with the additional feature of a steam chest located between case and outboard bearing . . . transfers heat to both pump and packing. Can be used with steam, hot water or heat transfer oil. Pump and steam chest static tested at 300 PSI; recommended pressure with steam is 125 PSI.

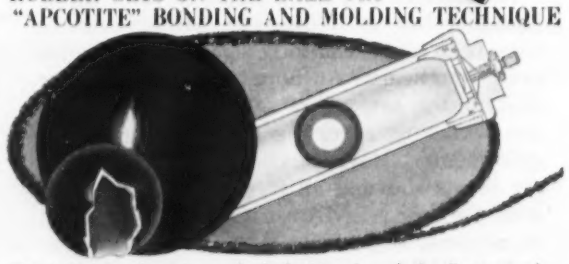
Send for Bulletin No. 29
GEO. D. ROPER CORPORATION
670 Blackhawk Park Ave.
Rockford, Illinois

ROPER Rotary Pumps

For more details circle NED-893 K7 on enclosed inquiry slip

THE SHAPE OF THINGS IN MOLDED RUBBER

RUBBER GETS ON THE BALL VIA "APCOTITE" BONDING AND MOLDING TECHNIQUE



The ball shown here is a spherical piston in a hydraulic accumulator of revolutionary design. A problem faced by the manufacturer was the pressure within the cylinder causing the rubber on the sphere to flow and pull away from the aluminum surface of the ball. Acushnet was asked to produce a better bond and covering.

Using a preform mold prior to curing and eliminating pins or location rods to hold the ball was the first step in getting around this problem. Final curing of the rubber covering included the use of "APCOTITE" rubber-to-metal bond. Result was a layer of rubber ⅛" thick, concentrically perfect, bonded to the aluminum insert.

"APCOTITE" bonding to metal is exclusive with Acushnet and provides for high strength bond of rubber, synthetic polymers, silicone and plastics to all metals for the life of the part. Send for informative brochure.

Specify "APCOTITE"!

Acushnet ACUSHNET PROCESS COMPANY
NEW BEDFORD, MASSACHUSETTS

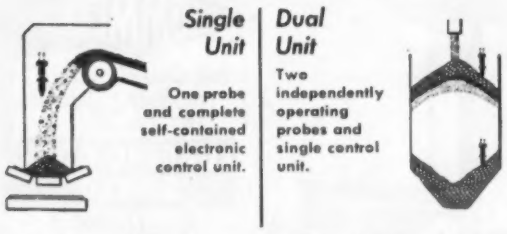
. . . Precision Molded RUBBER, SILICONES - "APCOTITE" BONDING

Address all communications to 782 Belleville Ave., New Bedford, Mass.

For more details circle NED-894 K7 on enclosed inquiry slip

ROBINTRONIC

AUTOMATIC LEVEL INDICATOR FOR BULK MATERIALS HANDLING



This accurate, easily installed electronic unit actuates an audible or visible signal to warn operators when materials vary from the pre-set level. When equipped with a power relay, it can also control the flow of materials by stopping and starting motors and other equipment.

RoBINtronic requires neither adjustment nor lubrication. It is engineered for heavy industrial service and functions with materials of all densities from rock and coal to grain and sand.

Send for free Bulletin 166, Department R, Hewitt-Robins, Stamford, Connecticut.

HEWITT-ROBINS

For more details circle NED-895 K7 on enclosed inquiry slip

new lithium base multi-use grease

This *one* tough, all-purpose grease does the work of many—on plain or anti-friction bearings, in paper mills, textile mills, steel mills, power plants, practically anywhere!

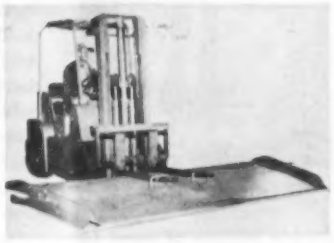
Use new Gulfcrown Grease to reduce inventory, cut lubricating costs, prevent application errors. Whether operating conditions are hot, cold or wet, new Gulfcrown Grease will save you money. Get details from your nearest Gulf Office, or write for free literature *today!*

GULF

GULF OIL CORPORATION
1822-B Gulf Building, Pittsburgh 30, Pa.

For more details circle NED-896 K7 on enclosed inquiry slip

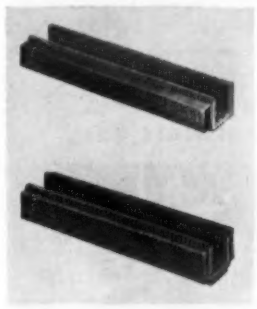
BRIDGE RAMPS fit double-door box cars



Designed to fit double-door box cars, this extra heavy duty welded steel ramp has a 22,000-lb axle load capacity. Illustrated unit is 9 ft wide at the car door, 13 ft wide at the dock, and is 5 ft long. It is equipped with ratchet locking devices, dual lifting stirrups for handling by fork lift truck, and tensionized curved crown. Top surface is steel safety tread plate. Made by **Roll Rite Corp.**, 801 Jefferson St., Oakland 7, Calif.

For more details circle NED-897 K7 on enclosed inquiry slip

PILE-LINED METAL CHANNELS seal sliding windows and doors



Two wool pile lined metal channel shapes are available for sealing sliding windows and doors against stationary or movable surfaces. Channels can be fabricated from aluminum, stainless steel, galvanized steel, and zinc. Metal is encased by the wool pile fabric. One of the U-shaped channels has pile on one outside leg, whereas the other channel shape has pile on its three outide surfaces for three-way weather protection in an opposing recessed channel. Made by **Schlegel Mfg. Co.**, Div. P-12, 277 N. Goodman St., Rochester 7, N. Y.

For more details circle NED-898 K7 on enclosed inquiry slip

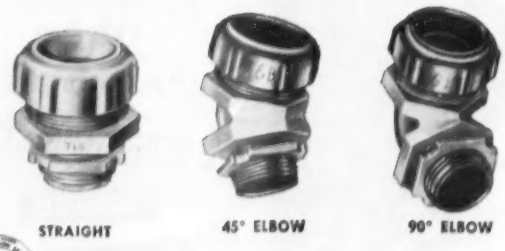
TOOL & PARTS TOTER is three-tray wheeled truck

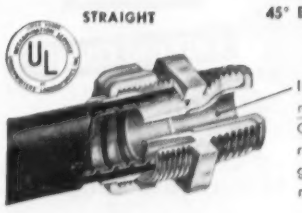
Usable at the machine as well as for stock picking and semilive storage, No. 368 Nifty Toter has a welded steel frame and three heavy-gage steel trays. It is capable of carrying up to 150 lb of tools or parts per tray. Arrangement of 5-in. solid rubber wheels and 4-in. swivel casters facilitates movement, even when fully loaded. Shelf spacing can be arranged to suit special needs. List price is $39.80. Made by **Lansing Co.**, Dept. DEN, Box 750, Lansing 3, Mich.

For more details circle NED-899 K7 on enclosed inquiry slip

NEW...SELF-INSULATED... CONNECTORS

for liquid-tight flexible conduit



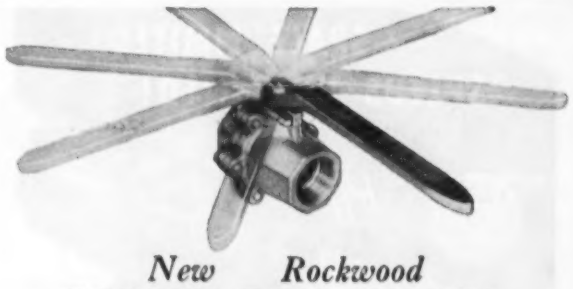


INTEGRAL INSULATION eliminates need for separate bushing. Connector far exceeds all UL requirements for continuity of ground, moisture seal and mechanical pullout.

These easy-to-install connectors seal out all moisture, oil, corrosive fluids . . . and provide positive insulation at the same time. Specially designed by T&B to accommodate all standard liquid-tight flexible metal conduit from ⅜" to 4", they require only a single wrench and need not be disassembled. Write for sample, and data on T&B's complete line of liquid-tight connectors.

THE THOMAS & BETTS CO., INC.
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada

For more details circle NED-900 K7 on enclosed inquiry slip



New Rockwood FORGED BALL VALVES

8 ways easier to handle

New Rockwood Ball Valves are made of forged brass for greater tensile strength and safety. You're assured of Full, Round Flow and fast, efficient operation and less friction loss too.

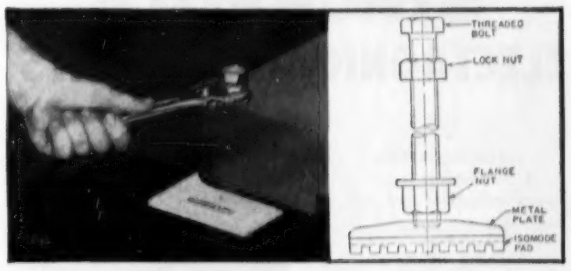
The handle of the new Rockwood Forged Ball Valve can be positioned in 8 different ways *giving you greater convenience.* The ¼ turn opens and closes the valve — *giving you Full, Round Flow, efficient operation, less friction.* The pressure of fluid in the Rockwood Forged Ball Valve automatically positions the ball against the synthetic rubber seat — *giving you a leakproof seal.* The forged brass ball in the Rockwood Forged Valve is chrome-plated to stand up under abrasion, pitting, scratching — *giving you trouble-free service.*

The new Rockwood Forged Ball Valves are tested and listed by Underwriters' Laboratories, Inc.

ROCKWOOD SPRINKLER COMPANY
2285 Harlow Street, Worcester 5, Mass.

For more details circle NED-901 K7 on enclosed inquiry slip

Now . . . level machines and stop vibration, too!



. . . with MB's Iso-Level Mounts

Easy does it. Place plate and flanged nut under machine foot, slip bolt through hole, turn nut to level, lock with upper nut.

No lagging to floor needed. The Isomode® Pad at bottom swallows up vibration and shock, prevents machine "creep." The mount saves maintenance, makes relocation of equipment easier, reduces noise.

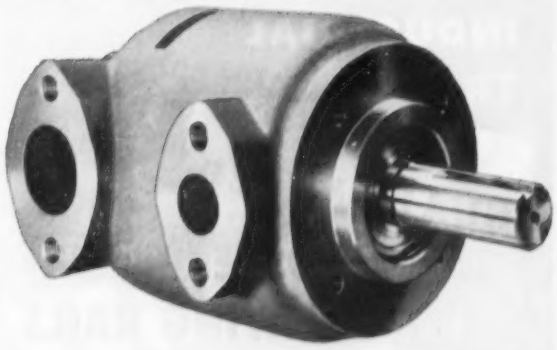
Sizes available for loadings from 100 to 12,000 pounds per mount.

ISOMODE PADS alone are also available, in 18" x 18" sheets. They support 50 lbs/sq.in. . . . simply cut size needed. Highly economical way to control vibration and noise. They last for years. Send for bulletins AD-1 and 415.

manufacturing company
A DIVISION OF TEXTRON INC.
1066 State Street, New Haven 11, Conn.

For more details circle NED-902 K7 on enclosed inquiry slip

FROM DENISON ...



CONTINUOUS 2000 PSI in a rugged, versatile vane-type HYDRAULIC PUMP

Ideal for mobile equipment . . . for special machinery . . . for automation. Fully balanced vanes and rotors assure peak efficiency, long life, minimum maintenance. Trouble-free starting under any weather conditions. Easily adapted to existing designs. Complete engineering details in Bulletin 200. Circle reader service card, or write:

DENISON HydrOIL ics

Denison and Denison HydrOILics are registered trademarks of Denison Eng. Div., ABMCO

DENISON ENGINEERING DIVISION
American Brake Shoe Co.
1192 Dublin Road, Columbus 16, Ohio

For more details circle NED-903 K7 on enclosed inquiry slip

solved with the

Graham

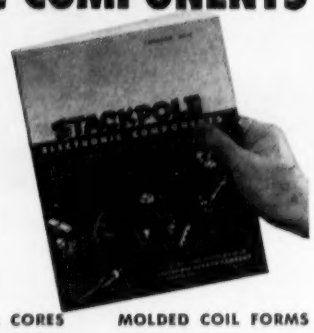
most reliable variable speed drive made

- ULTIMATE IN SIMPLICITY AND COMPACTNESS—a straight line extension of a standard induction motor—or available without motor.
- UNLIMITED SPEED RANGE — from any desired maximum speed to zero, including reverse, without stopping motor.
- UNMATCHED ACCURACY—of speed setting and re-setting and speed holding.
- NO PERISHABLE PARTS—such as belts or tubes, requiring periodic replacement.
- PROVED PERFORMANCE—twenty years satisfactory use as standard equipment.
- LOW COST—a better job for less money.

GRAHAM TRANSMISSIONS, INC.
DEPT. NED • MENOMONEE FALLS, WISCONSIN

For more details circle NED-904 K7 on enclosed inquiry slip

Write for this 56-page GUIDE to STACKPOLE ELECTRONIC COMPONENTS



- FIXED RESISTORS
  ½, 1 and 2-watt types for every industrial and military use.
- VARIABLE RESISTORS
  Volume, tone controls, potentiometers, etc.
- POWDERED IRON CORES
- CERAMAG® Ferromagnetic CORES — MOLDED COIL FORMS
- INEXPENSIVE SLIDE SWITCHES
- GA CAPACITORS
- CERATAB® PRINTED CIRCUITS

Electronic Components Division
STACKPOLE CARBON CO., St. Marys, Pa.

For more details circle NED-905 K7 on enclosed inquiry slip

FOSTER *Quality* RELAYING RAILS

Lower installation and maintenance costs—handle more cars better.

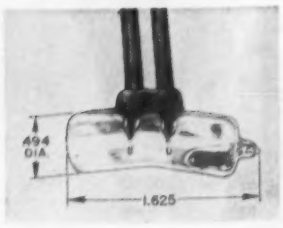
Depend on Foster to match sizes and specifications to your exact requirements on any track job. Foster's nationwide warehouses also stock every Section of New Rail, 12# thru 175#, Switch Material and Track Accessories.

FASTER FOSTER — SEND FOR CATALOGS NE-10

L. B. FOSTER CO.
PITTSBURGH 30, PA. • NEW YORK 7, N. Y. • CHICAGO 4, ILL.
ATLANTA 8, GA. • HOUSTON 2, TEX. • LOS ANGELES 5, CAL.

For more details circle NED-906 K7 on enclosed inquiry slip

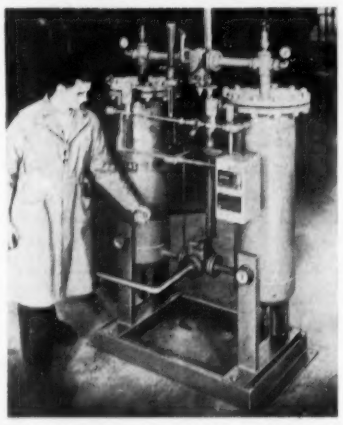
MERCURY SWITCH
has positive pulse actuation



Positive pulse actuation is featured by this AS702B Micro Switch mercury switch, applicable to business machines, call systems, and counting and other devices. High surface tension of mercury and double incline of bent tube pull the mercury through closed position without contact welding or dead break. Mercury is in motion when circuit is made and cannot stop until it passes through on-off position and on to other end of tube. Electrode and glass barriers prevent circuit closure if device in which switch is used is tipped in any but the normal direction. The single-pole double-throw units are offered with or without terminals and with 7-in. lead wires. They are rated 1 amp resistive, 115 v ac. Made by **Minneapolis-Honeywell Regulator Co.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

For more details circle NED-907 K7 on enclosed inquiry slip

DEHYDRATORS
dry instrument air, process gas



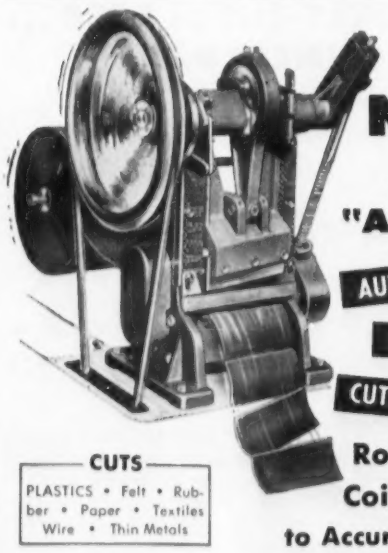
Eleven sizes in standard line of steam - reactivated dehydrators handle from 10 to 1000 scfm (air at 70° F and 100 psi) in continuous operation with manual, semi-automatic, or automatic cycling. Developed for drying instrument air and process gas, the units operate on an 8-hour reactivation cycle. Tower inspection and desiccant charging are simple operations. Special desiccant, diaphragm-operated steam valves, welded fittings, 250-psi construction, and thermal-operated cycling for elimination of electricity on semi-automatic models are optional. Made by **Selas Corp. of America,** Dreshertown Rd., Dresher, Pa.

For more details circle NED-908 K7 on enclosed inquiry slip

Transistorized Equipment

Electronic Research Associates, Inc.—Folder-type catalog contains ten data sheets on complete line of transistorized equipment. Inverters and converters, high current power supplies, Transpac power packs, transistor test equipment, miniaturized power packs, transistor regulated direct-current supplies, Transamp packaged circuits, and transistor application power supplies are covered.

For more details circle NED-909 K7 on enclosed inquiry slip



NEW JACO "AUTOGIL"

AUTOMATICALLY MEASURES CUTS and COUNTS

Roll and Coil Stock to Accurate Lengths

CUTS
PLASTICS • Felt • Rubber • Paper • Textiles
Wire • Thin Metals

AUTOGIL . . . a new, heavy-duty automatic guillotine . . . eliminates costly hand cutting . . . increases production.

Available in two sizes . . . two types . . . up to 5" or 15" wide . . . infinite feed lengths . . . each type maximum 8" or 96" long . . . cuts material up to 3/16" thick . . . production speeds . . . from 120 cuts per minute . . . send for details to Dept. 25A.

JACO DEVICES, INC.
95 HIGH STREET • HINGHAM, MASS.

For more details circle NED-910 K7 on enclosed inquiry slip

For more details circle NED-911 K7 on enclosed inquiry slip

the **HOFFCO-VAC 35** outsweeps the field in the 5 h.p. range

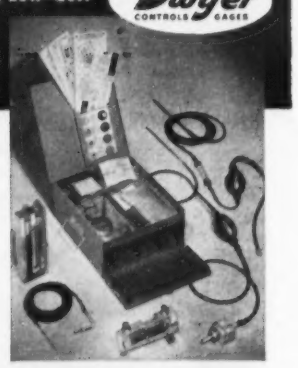
Hoffman's modern, streamlined "Hoffco-Vac" 35 portable vacuum-cleaning unit offers you:—50% greater dust capacity (4.4 cu. ft.) . . . easy handling and compact design . . . higher vacuum (6.5 ins. mercury) . . . longer effective hose reach (one 75-foot length or simultaneously two 50-foot lengths) . . . easy maneuverability by one man even in crowded areas . . . swing-hinged inspection door with 16-inch diameter . . . pull-away dust container with its own three casters and easy-pour back . . . pre-lubricated outboard bearings, mounted in rubber . . . and roller-bearing, rubber-tired wheels. Write today for bulletin M-135, giving full technical information on this "big" little cleaner, to:—

AIR APPLIANCE DIVISION
U.S.HOFFMAN MACHINERY CORP.
Dept. NED, 103 Fourth Avenue, New York 3, N. Y.

For more details circle NED-912 K7 on enclosed inquiry slip

A Complete Combustion Efficiency Test In 30 Seconds With the NEW, Low-Cost
DWYER COMBUSTION TEST KIT (No. 1100)

Dwyer CONTROLS GAGES



- SIMPLE TO USE
- LIFETIME ACCURACY
- PORTABLE
- COMPLETE
- INEXPENSIVE

Includes:
CO_2 Indicator — Smoke Gage
Draft Gage* — Slide Rule Computer
Stack Thermometer — Magneclips
...and all necessary accessories and fittings — Instructions

Here's everything you need for a thorough, professional job of combustion testing. This new DWYER Kit simplifies the testing of any installation . . . residential, commercial or industrial: gas, oil or coal fired. You can perform a complete analysis in less than 30 seconds . . . *accurate to within* ±½% CO_2.

Handy, handsome metal kit—(also available with CO_2 Indicator alone)—is custom-fitted for all necessary parts and accessories.

*Draft Gage...famous DWYER Inclined Manometer. Continuously indicating type, permanently accurate—choice of ranges: 0 to ¼", 0 to ½", or 0 to 1" water.

Write for complete information

F. W. DWYER MFG. CO.
P. O. BOX 373-Q • MICHIGAN CITY, INDIANA

For more details circle NED-913 K7 on enclosed inquiry slip

POWERFUL . . . VERSATILE . . . lifts loads up to 1000 lbs.—to a 60" height—yet is so compact you can maneuver it in a six-foot aisle. Runs forward or reverse . . . automatic push-button controls on handle. Economical 12-volt system with built-in charger. Backed by Uhrden's 90-day guarantee.

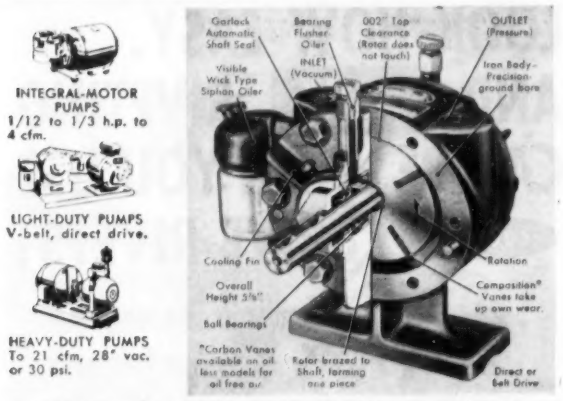
ADVANCED SAFETY FEATURES
- Self-releasing controls
- Three-position wheel brakes
- Emergency brake
- Handle can't drop—swings up automatically when released

Send for complete CHAMPION specifications

Tubar LIFT DIVISION
uhrden, inc.
DENNISON, OHIO
Tubar ASSURES Quality

U-1056-71A

▲ For more details circle **NED-914 K7** on enclosed inquiry slip ▲



Quality and simplicity keep efficiency high on

GAST ROTARY VANE AIR PUMPS

This cutaway reveals why Gast Air Pumps are in demand for plant use and original equipment. Manufactured to high quality-precision standards, all models embody this efficient, simple rotary-vane design. Rotor is balanced; sliding vanes light in weight for minimum motion-energy-friction loss compared to other pumps. As vanes take up their own wear automatically, pump delivers full performance for years.

Write for "Application Ideas" booklet and catalog—mention capacity you need! **Gast Manufacturing Corp.** P. O. Box 117-R, Benton Harbor, Michigan.

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY
- AIR MOTORS TO 4 H.P.
- COMPRESSORS TO 30 P.S.I.
- VACUUM PUMPS TO 28 IN.

See Our Catalog in Sweet's Product Design File

▲ For more details circle **NED-915 K7** on enclosed inquiry slip ▲

▲ For more details circle **NED-916 K7** on enclosed inquiry slip ▲

DOVE-TAILED STRAIGHT EDGES in lengths from 18 to 84 in.

Semisteel dove-tailed straight edges are used to check accuracy in scraping the dovetails of machine tool beds. Working surfaces are accurate to within 0.0002 in. T.I.R. Straight edges are available in nine standard lengths from 18 to 84 in. The standard unit has one side at a 45-degree angle. Made by **Challenge Machinery Co.**, Dept. NED, 1943 Thomas St., Grand Haven, Mich.

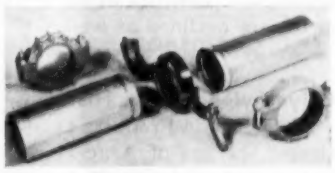
▲ For more details circle **NED-917 K7** on enclosed inquiry slip ▲

CONVEYER SWITCH three-way unit sorts automatically

Packages can be automatically sorted according to size, weight, or classification by this three-way conveyer switch. It can be controlled by remote pushbuttons, limit switches, photoelectric cells, or other electrical means. Limit switches automatically classify by package heights, and scale controls divert underweight and overweight packages to right and left, while those of correct weight pass straight ahead. Other applications are also possible. Standardized widths are 12, 15, 18, and 24 in. Turns are 45 or 90 degrees. Three-way switch is also made for manual control by a single hand lever. Made by **E. W. Buschman Co.**, 4482 Clifton Ave., Cincinnati 32, Ohio.

▲ For more details circle **NED-918 K7** on enclosed inquiry slip ▲

PIPE COUPLINGS for 1¼ to 12-in. thin wall pipe



Thin wall steel and aluminum pipe and tubing with grooved ends are easily connected with Vic-Easy quick couplings, available for 1¼ to 12-in. pipe sizes. A resilient gasket is first slipped onto one of the pipe ends, then positioned over the joint. Coupling is placed over the gasket and fastened. Joint is flexible to allow some deflection in any direction without leakage. Couplings withstand up to 1000 psi working pressures, and standard gaskets withstand 180° F temperatures. The hinge-type Snap-Joint coupling requires no installation tools, whereas both the lightweight coupling and a heavy-duty unit for high external stress and high internal pressures require a single wrench. Made by **Victaulic Co. of America**, Dept. NED, Box 509, Elizabeth, N. J.

▲ For more details circle **NED-919 K7** on enclosed inquiry slip ▲

Do the job in fewer man-hours! Drive your reamers the modern *low-cost* way—with a bench-mounted Greaves Reamer Driver.

Put a Greaves Reamer Driver on the job. Send today for complete information.

CAPACITY—¼" to 1½" reamers.

FOOT SWITCH OPERATION—leaves both hands free for holding the work.

MOTOR—1725 rpm.—110 V AC—wired for light socket connection.

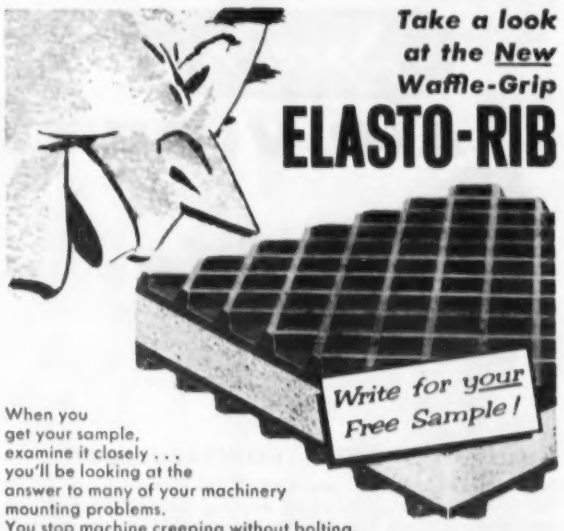
4-SPEED OPERATION—20, 32, 56 and 85 rpm. Easy changeover.

4-JAW CHUCK—universal machine tool chuck—(3-jaw chuck optional).

COMPACT, COMPLETE—12¾" wide, 21¼" long, 9¼" high.

THE GREAVES MACHINE TOOL CO.
2302 EASTERN AVENUE CINCINNATI 2, OHIO

▲ For more details circle **NED-920 K7** on enclosed inquiry slip ▲

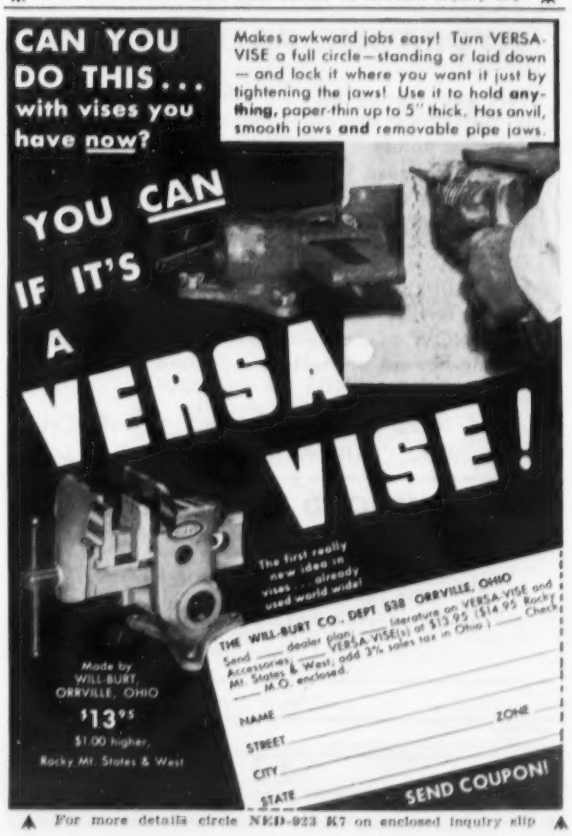


When you get your sample, examine it closely . . . you'll be looking at the answer to many of your machinery mounting problems.
You stop machine creeping without bolting, stop vibration and noise transmission with New Elasto-Rib. The all directional waffle-grip neoprene and resilient cork combine to form a non-slip cushion.
New Elasto-Rib is available in sheets; or with a load-distributing steel plate; or made up into Leveling Dampers.
We'll include complete data with your sample. Write today, mentioning Bulletin 42.

THE KORFUND COMPANY, INC.
KORFUND VIBRATION CONTROL — SPRINGS — RUBBER — CORK
48-35P Thirty Second Place, Long Island City 1, N. Y.
In Canada: 510 Canal Bank, Ville St. Pierre, Montreal

▲ For more details circle **NED-921 K7** on enclosed inquiry slip ▲

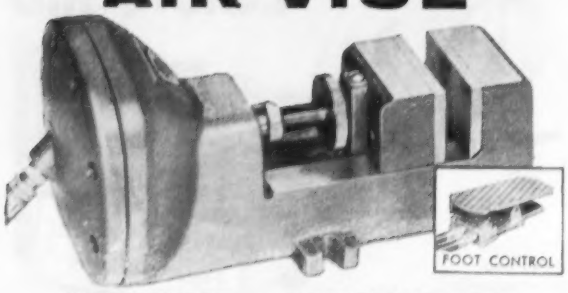
▲ For more details circle **NED-922 K7** on enclosed inquiry slip ▲



▲ For more details circle **NED-923 K7** on enclosed inquiry slip ▲

Speedy

AIR VISE



HIGH SPEED · POWERFUL GRIP

New, improved model speeds up all repeat operations—*milling, drilling, tapping, punching, bending, riveting.* Both hands left free to produce more! Light squeeze to 2250 pounds pressure! Extra thick jaws for attaching jigs. Jaws open to 3-inches; 1/16" to 5/8" maximum travel. Complete with foot control, air hose and fittings..... **$44.00**

SPEEDY 1-TON AIR PRESS

Does the work of expensive presses! Power factor 15 times air line pressure. 5-inch throat; Ram 0 to 5"; stroke ⅝"; table 5" x 5". Operated by foot or fingertip controls. **$85.00**

Order from Your Supplier or Write for Air Tool Catalog

W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35

AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

▲ For more details circle NED-924 K7 on enclosed inquiry slip ▲

RAYMOND *Lightweight*

HYDRAULIC PALLET TRUCK

Talk about popularity . . . this RAYMOND L2P is outselling all other hand pallet trucks in America today.

WHY? Because this RAYMOND Truck does so many jobs so well . . . ruggedly built to withstand years of use and abuse. Lightweight, easy to maneuver. Patented booster rollers provide effortless pallet entry. Convenient safe foot pedals lift and lower your load. Completely hydraulic for dependable operation.

AND NOW . . . a new LOW PRICE! High sales volume has cut production costs and RAYMOND passes the SAVINGS on to YOU!

Why don't you ask for one

MAIL COUPON for full details!

The RAYMOND CORPORATION

4146 Madison St., Greene, N.Y.

☐ Send bulletin on Lightweight Hydraulic Pallet Truck

☐ Please have a RAYMOND representative call

NAME TITLE

COMPANY

STREET

CITY STATE

▲ For more details circle NED-925 K7 on enclosed inquiry slip ▲

New Literature and Catalogs

Equipment Manual

Precision Equipment Co.—24-page "Equipment Manual for Executive Planning" describes newest equipment available to help solve managerial problems. Included are steel shelving and cabinets, drum trucks, blueprint cabinets, ladders, parts bins, chairs and stools, hand trucks, hoists, rotary bins, lockers, benches and public address systems.

▲ For more details circle NED-926 K7 on enclosed inquiry slip ▲

Superpressure Equipment

American Instrument Co.—125-page catalog 407 lists hundreds of standard and accessory high pressure items, as well as custom-built superpressure equipment designed for use at up to 100,000 psi and temperatures to 1000° F. Details are given on reaction vessels, superpressure valves, tubing and fittings, hydraulic and gas booster pumps, compressors, pressure generators, pressure balances, dead weight gages and other items.

▲ For more details circle NED-927 K7 on enclosed inquiry slip ▲

Plastic Pipe & Fittings

Tube Turns Plastics, Inc.—Technical data and installation information on unplasticized polyvinyl chloride pipe are provided in booklet. Specifications for threaded and socket types of PVC fittings, valves and flanges in both normal and high impact grade are also given. PVC is highly resistant to corrosion, yet costs less than stainless steel.

▲ For more details circle NED-928 K7 on enclosed inquiry slip ▲

Mailing Suggestions

Pitney-Bowes, Inc.—"29 Timely Mailing Tips" is title of 12-page form B2311 which covers helpful hints for handling regular daily mail, parcel post pointers, and tips for advertising and other volume mailings. Benefits of metered mail and the postage meter are outlined as well.

▲ For more details circle NED-929 K7 on enclosed inquiry slip ▲

Polyethylene Case Histories

Argo Plastic Products Co.—Documented case histories of the use of Argo-170 polyethylene as a chemically inert replacement for metal, rubber and other anticorrosion materials are presented in 19-page plastic-bound booklet. Actual savings effected through use of this plastic are given.

▲ For more details circle NED-930 K7 on enclosed inquiry slip ▲

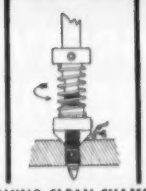
Precision & Commercial Die Sets

E. W. Bliss Co.—20-page illustrated catalog 70-A provides sizes, dimensions, prices, and other ordering data for full line of precision and commercial die sets. These sets are offered in both standard two-pin series and the rear two-pin rectangular series.

▲ For more details circle NED-931 K7 on enclosed inquiry slip ▲

TAP AND DEBURR IN ONE OPERATION

Slip a BURR-BIT onto any make tap and holes are automatically deburred while they are being tapped. Save money, time and labor by COMBINING TWO OPERATIONS INTO ONE.



AS TAP IS WITHDRAWN, BURR-BIT DEBURRS, LEAVING CLEAN CHAMFER

First thread which creates burr, has been AUTOMATICALLY, QUICKLY AND PRECISELY REMOVED, leaving perfectly smooth finish for easy screw insertion.

Precisely engineered of finest quality high speed tool steel for use on almost every material. The BURR-BIT is used by many large and small manufacturers throughout the country.

For full information and specifications on the BURR-BIT, write to

VERNON DEVICES, Inc.

481 E. 3rd Street Mt. Vernon, N.Y. MOunt-Vernon 4-1686

▲ For more details circle NED-932 K7 on enclosed inquiry slip ▲

OLIVER Farquhar CONVEYORS

do it faster for less cost

for package handling

In-plant handling of 4000-pound parts is simplified and speeded in this industrial plant by using Farquhar Gravity Conveyors

This Farquhar Power Belt Conveyor line increased loading capacity and reduced work force needed to move bags from bag filler into trucks.

for bulk handling

Sturdy, trouble-free Farquhar Conveyors provide ample capacity for handling tons of bulk materials.

Write today for Bulletins on all types of money-saving Farquhar Conveyors.

A. B. FARQUHAR DIVISION
The Oliver Corporation
Conveyor Dept. O-04, York, Pa.
Factory Branch: 618 W. Elm St. Chicago 10, Ill.

▲ For more details circle NED-933 K7 on enclosed inquiry slip ▲

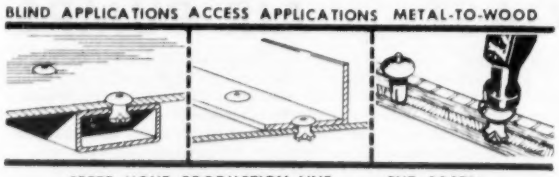
LOOK HOW EASY... AND FAST RIVETING CAN BE WHEN YOU USE SOUTHCO DRIVE RIVETS!

Rivet and Mfg. Patented.

a hammer is the only tool
...drive like nails
...automatic "pull-up" action

Fastest for:

BLIND APPLICATIONS ACCESS APPLICATIONS METAL-TO-WOOD



SPEED YOUR PRODUCTION LINE . . . CUT COSTS!

For complete data, write Southco Division, South Chester Corporation, 243 Industrial Highway, Lester, Pa.

SOUTHCO FASTENERS LION

©1956

▲ For more details circle NED-934 K7 on enclosed inquiry slip ▲

PROVED BEST IN ACTUAL USE

NATIONAL MODEL 400

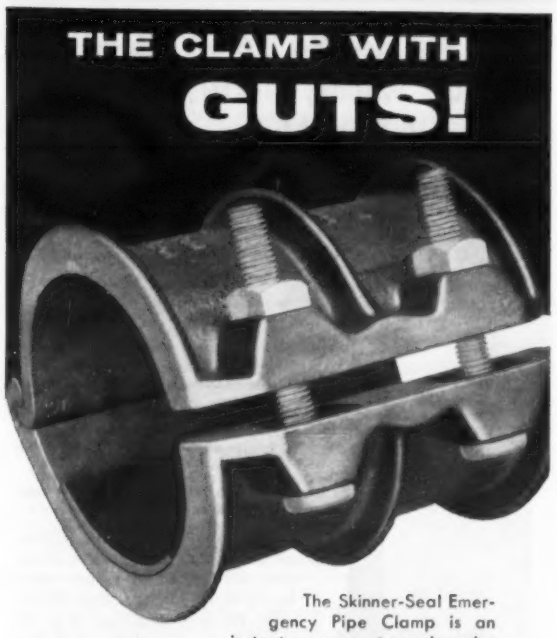
NATIONAL NS SANDERS

Over 125,000 National Sanders are in daily use in industry . . . proving their efficiency, reliability, and durability. There are reasons for this popularity: (1) They are lightweight . . . only 4 lbs. (2) Have 25 sq. in. of abrasive area, (3) Powerful . . . will not stall, (4) Vibrationless . . . easy to operate, (5) ¾" orbital stroke removes paint rapidly. Write for complete catalog of National Sanders.

NATIONAL AIR SANDER, INC.
2818 AUBURN ST. ROCKFORD, ILL.

▲ For more details circle NED-935 K7 on enclosed inquiry slip ▲

THE CLAMP WITH GUTS!



The Skinner-Seal Emergency Pipe Clamp is an instant, permanent repair under any operating condition. No pressure too high. Anyone can apply in a few moments. Made in all sizes, ½" to 12", for steel and C. I. pipe. Carried in stock by 1300 industrial distributors!

M. B. SKINNER CO., South Bend 21, Ind.—Established 1898

For more details circle NED-936 K7 on enclosed inquiry slip

NEW...

- SMALL
- COMPACT
- COMPLETE

Norgren MICRO-FOG® LUBRICATING UNIT

For lubricating air-operated parts of machine tools

- Removes solids and liquids from air line
- Exact control of air pressure
- Efficient MICRO-FOG Lubrication
- Visible oil feed
- Easy-to-see oil level

WRITE FOR BULLETIN 556

C. A. Norgren Co.

3405 SO. ELATI STREET • ENGLEWOOD, COLORADO

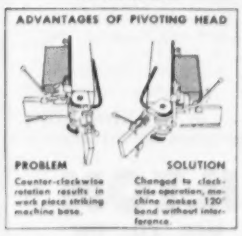
For more details circle NED-937 K7 on enclosed inquiry slip

SPEEDS BENDING ODD SHAPED PARTS ...TUBING, PIPE, EXTRUSIONS, ETC.

Pines Model 1400 with extended base, handles 18 ft. lengths of tubing over mandrel. Standard machine takes 4 x 8 ft. floor space.

PINES 2-IN-1 Bender

ADVANTAGES OF PIVOTING HEAD



New Model 1400 Handles Both Clockwise and Counter-Clockwise Operations . . .

For experimental, small lot, and production work, Pines Model 1400 Bender offers outstanding advantages. Designed with double tool-holder ways and a pivoting head assembly, you can handle multiple planes and odd shapes fast and efficiently. Change-overs from clockwise to counter-clockwise operation can be made in about two minutes. Designed for handling bars, rolled shapes, extrusions, and tubing up to 1¼" O.D., the machine features economical, quick-change tooling, smooth, hydraulic operation, and degree-of-bend turret selector. Typical production speed is 300 to 400 bends per hour.

PINES ENGINEERING CO., INC. Specialists in Tube Fabricating Machinery 640 WALNUT • AURORA, ILLINOIS

WRITE FOR NEW CATALOG . . . Gives latest information, specifications, and production and tooling data.

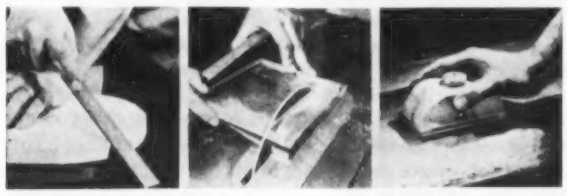
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

For more details circle NED-938 K7 on enclosed inquiry slip

New Processes and Materials

TUNGSTEN CARBIDE ABRASIVE grit brazed on sheets, rods, wheels, and sleeves offers long-life cutting

Tungsten carbide grits which remain sharp indefinitely are brazed onto steel to form an abrasive which is reported to outlast sandpaper 100 to 1 in industrial



operations on wood, plastics, and composition materials. Called Perma-Grit T-C abrasive, it is available in sheet, rod, sleeve, and wheel forms. Permanent rigid bond and heat-dissipating feature of the steel base contribute to long life and savings in abrasive material and machine downtime.

Loaded abrasive can be cleaned and restored with solvents and/or a wire brush. Made into a saw wheel (center) to fit most bench and radial saws, it sands as it cuts, as grits are bonded to sides and rim of the wheel. Such a wheel, rotating under power, can be touched without injury.

Fine and medium grit shoe is standard with the hand sander (right). The file (left) cuts in both directions. Shoes for portable orbital sanders are offered in five grits. Rods for spindle sanders are made in ⅛ and ¼-in. diameters, and sleeves for such machines range upward from ¼-in. diameter. Made by **Skil Corp.**, 5027 Elston Ave., Chicago 30, Ill.

For more details circle NED-939 K7 on enclosed inquiry slip

GEAR LUBRICANT in 16-oz. self-spraying container

Handi-Lube liquid gear composition is now packaged in a 16-oz self-spraying aerosol container for handy application to open gears and sliding surfaces. A protective film of lubricant is sprayed on pressure side of surface from distance of 12 to 18 in. Lubricant has no disagreeable odor, is weatherproof, and will not break down even after prolonged use under water. It is offered in light, medium, and heavy weights for different climatic conditions, and is nontoxic. Made by **Whitmore Mfg. Co.**, Dept. NED, 3816 Iron Court, Cleveland 4, Ohio.

For more details circle NED-940 K7 on enclosed inquiry slip

More horsepower-hours per dollar!

NEW! ONAN SHORT STROKE ENGINES

Model CCK, 12.9 H.P., two-cyl., gasoline-powered.

Add the powerful sales features of Onan long-life engines to your equipment at no extra cost. Designed and built for continuous service; run hundreds, *even thousands of hours* with minimum attention. Compact, smooth-running.

Onan air-cooled engines are today giving outstanding performance and sales appeal to equipment such as portable welders, air conditioners, truck refrigeration, pumps, etc. Build competitive advantages into your equipment with Onan long-life, air-cooled power.

THREE MODELS—**Model CCK**, 12.9 H.P., two-cylinder, gasoline-powered. **Model DRP**, 15 H.P., two-cylinder, Diesel-powered. **Model AJ** 5.5 H.P., one-cylinder, gasoline-powered.

Write for Specifications!

Onan ELECTRIC PLANTS

D. W. ONAN & SONS INC.

3637 Univ. Ave. S. E., Minneapolis 14, Minn.

For more details circle NED-941 K7 on enclosed inquiry slip

HARGRAVE Tested Tools THE CINCINNATI TOOL COMPANY

HARGRAVE

THE MOST COMPLETE LINE

Individually Power-Tested

WRITE FOR FREE CATALOG

Showing a Clamp for every purpose, openings from ¾" to 12" and depth from 11/16" to 16", also Chisels, Punches, Masonry Drills, Gasket Cutters, Brace Wrenches, File Cleaners, etc.

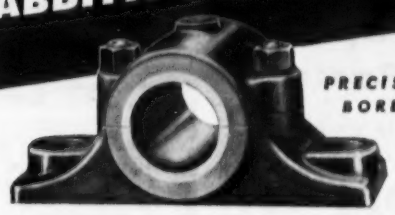
There is an industrial Distributor Stock Near You

THE CINCINNATI TOOL COMPANY

1995 Waverly Ave., Cincinnati 12, Ohio

For more details circle NED-942 K7 on enclosed inquiry slip

DODGE BABBITTED BEARINGS



PRECISION BORED!

TRUE RUNNING!

DEPENDABLE!

● There's a *big* difference between a Dodge Journal Bearing and a common flat box — a difference that pays off in longer years of service, smoother operation, power savings! Dodge Journal Bearings are precision bored and faced — to insure maximum bearing surface for radial and thrust loads . . . Solid or Split Journal. Shaft sizes from 1/2" to 3-15/16". Stocked by Dodge distributors. Write us for full details.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE of Mishawaka, Ind.

FIRST IN POWER TRANSMISSION MACHINERY

For more details circle NED-943 K7 on enclosed inquiry slip

The Standard of Excellence!

VACO BREAK-PROOF SHOCK-PROOF Screw Drivers

■ For design, utility, and service you can't beat VACO. The Comfordome handle and oil tempered chrome vanadium steel blade assure maximum convenience at low cost. The VACO name and unconditional guarantee assure finest workmanship.

Look for the VACO Vari-Board! Next time you need a screw driver, fit the driver to the screw by making your selection from a VACO Vari-Board. Your choice of up to 120 screw drivers at a glance!

NEW! VACO PLIERS! Now available in all popular styles and sizes. Made to VACO quality specifications.

VACO PRODUCTS COMPANY, 317 E. Ontario St., Chicago 11, Ill.

In Canada: Vaco-Lynn Products, Ltd., Montreal 1, Quebec

For more details circle NED-944 K7 on enclosed inquiry slip

New Townsend Versa-Rivets* Assure Uniform Fastening

New Townsend Versa-Rivets provide the most uniform fastening method available to industry. These versatile rivets have high clinch and positive stem retention, and they completely fill every hole, regardless of variations in hole sizes. In addition to providing strength and uniformity, Versa-Rivets simplify inventories, since rivets of the same length may be used for various thicknesses of material. They are available in the universal head, with one length for each diameter.

For full information on how Townsend Versa-Rivets can give you a more uniform method of fastening, write for Bulletin TL-118 to Townsend Company, P. O. Box 237-G, New Brighton, Pa. *Patents issued and pending

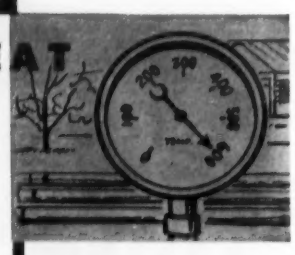
Townsend Company
NEW BRIGHTON, PENNSYLVANIA

For more details circle NED-945 K7 on enclosed inquiry slip

PROVED...

UNDER HEAT

KEY® Graphite Paste



expands under heat, fills irregularities in joints, threads and gaskets; is the ideal compound for oil, gas and high-pressure steam service. Joints break easily.

Make the heat expansion test. Put a small amount of KEY Paste on a metal strip — apply heat and watch it expand. It will not thin-out.

Stocked by over 1000 Supply Houses

SEND FOR YOUR FREE SAMPLE

Write Dept. Z-10 for trial can of KEY Graphite Paste.

W-K-M
DIVISION OF ACF INDUSTRIES INCORPORATED
PLANT: MISSOURI CITY, TEXAS
MAILING ADDRESS: P. O. BOX 2117, HOUSTON, TEXAS

KP 5704

For more details circle NED-946 K7 on enclosed inquiry slip

You can feel its new flexibility... see the new suppleness of

BRONCO 66 CERTIFIED — PORTABLE ELECTRICAL CORDS & CABLES

BRONCO 66 Certified, because it is Synchro-Cured, has long been famed as the most flexible cord and cable on the market. Now, a new treatment lubricates the insulation on the single conductors. When the cable is flexed, the singles slide against each other with less friction than ever before.

Write for a free sample of the new BRONCO 66 Certified so that you may feel and see this new flexibility for yourself.

Sold Nationally by Electrical Wholesale Distributors

WESTERN INSULATED WIRE CO.
LOS ANGELES 58, CALIFORNIA

For more details circle NED-947 K7 on enclosed inquiry slip

New Literature & Catalogs

Single Terminals & Feed-Throughs

Hermetic Seal Corp.—Large variety of standard single electrical terminal feed-throughs and standoffs are shown in 12-page supplementary catalog 657-B with specifications. Terminals are produced in Vac-tite seals constructed by a glass-to-metal chemically bonded compression process. All are available hot tin dipped or in precious metal finishes.

For more details circle NED-948 K7 on enclosed inquiry slip

Closed-Circuit Industrial TV

Cohu Electronics, Inc., Kin Tel Div.—The basic Kin Tel wired closed-circuit industrial television system, consisting of camera, camera control, and monitor is described in catalog 6-42. Data cover remotely controlled pan-tilt, iris-focus, and other camera accessories, as well as ruggedized equipment for operation under noise, heat, shock, temperature, or humidity extremes.

For more details circle NED-949 K7 on enclosed inquiry slip

Bulk Gas Delivery System

Air Reduction Sales Co.—Bulk delivery method of handling industrial gases in large quantities is discussed in 16-page catalog 450. Trailer delivery units are shown with diagrams for unit parking. Information on control equipment, measurement of gas consumption, and distribution pipelines is also included.

For more details circle NED-950 K7 on enclosed inquiry slip

Testing Services

Aerotest Laboratories Inc.—"Testing Services" is title of 12-page brochure containing complete illustrated description of company's plant and equipment facilities. Details are offered as well on environmental and qualification tests, design evaluation tests, research and development, production sampling tests, test equipment design, inspection methods and procedures, and quality control analysis.

For more details circle NED-951 K7 on enclosed inquiry slip

Floor Maintenance Machines

American Floor Machine Co.—All buying facts pertaining to floor machines and vacuums for wet or dry pickup are provided in file folder kit. Kit contains 12-page catalog on machine and attachment selection, a sheet on five different size vacuums, a 12-page indexed stuffer on vacuums, a 4-page circular on the Lincoln Autoscrubber, and another circular on a portable electric concrete grinder.

For more details circle NED-952 K7 on enclosed inquiry slip

An Easy Way to Make Charts

Chart-Pak, Inc.—"Visualization Made Easier" is title of 24-page guide to the use of pressure-sensitive printed tapes, templates, workboards, and other chart materials. Advantages of the new Tape-Pen, a handy tool designed to facilitate application of 1/32 and 1/16-in. wide Curve Line pressure-sensitive tape to charts, are explained.

For more details circle NED-953 K7 on enclosed inquiry slip

Q. WHAT IS IT? WHAT'S IT FOR?

A.

Frankly, we don't know. The customer didn't tell us. But he wanted 1,000, and we made them at an amazingly low cost. Special sizes and shapes of shop boxes are economically produced by our "Chem-Board" process of rigidizing hi-test corrugated board to remarkable strength.

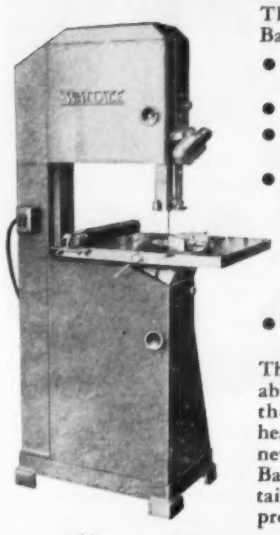
We make many standard size tote boxes . . . nesting, stacking and vertical sided . . . but we'll custom-make any box your product or use calls for.

More and more famous name industries are using Convoy Tote Boxes. Try us.

CONVOY, INC.
CANTON 6, OHIO
P. O. Station B, Box 216-N
GReenwood 7-4569

For more details circle NED-954 K7 on enclosed inquiry slip

New Wallace No. 56 18" Band Saw ... cuts woods, plastics, metals ... easily! quickly!



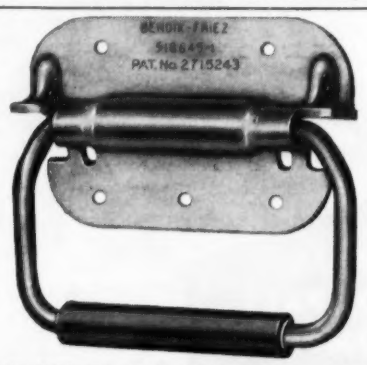
The new Wallace No. 56 Band Saw offers . . .

- Full range of speeds from 50 to 3800 fpm
- Sealed-for-life bearings
- Exclusive blade guide adjustment — from above
- Maximum capacity — 12" between table and guide; 17¾" between saw blade and frame
- Table accommodates standard rip fence and miter gauge — adjustable to any angle from —10° to 45°
- Lowest priced machine of commercial capacity

These and many more profitable features are embodied in the advanced design and heavy-duty construction of the new 18-inch Wallace No. 56 Band Saw. Write for full details on this low-cost, high-production band saw.

J. D. WALLACE & COMPANY, INC.
318 N. Market St., Warsaw, Indiana

For more details circle NED-955 K7 on enclosed inquiry slip



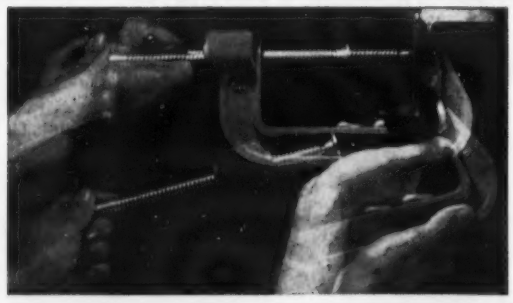
HEAVY-DUTY INDUSTRIAL HANDLE

RUST PROOF! SHOCK PROOF! MEETS MILITARY SPECIFICATIONS C-4150A, T-945A

Lifts 200 pounds with adequate safety factor. Special sleeve on grip will not crack, chip, become sticky or tacky in temperatures from −65° to +160°F. Patented design eliminates pinching, holds grip against surface when not in use. Attaches easily. Write for free literature and quantity discounts. Bendix-Friez, 1444 Taylor Avenue, Baltimore 4, Maryland.

Friez Instrument Division — Bendix Aviation Corporation

For more details circle NED-956 K7 on enclosed inquiry slip



A TOUCH ADJUSTS IT!
THREE TONS CAN'T BUDGE IT!

Wilton Rapid Titan C-Clamps can be adjusted with the slightest pressure, and tightened so securely that they'll support over three tons of weight! Wilton's patented wearproof nut allows the spindle to be engaged or disengaged automatically, and tightened securely over its full length and diameter. No buttons, springs, or triggers. Use Rapid Titan C-Clamps throughout your plant to save time and labor. UNCONDITIONALLY GUARANTEED FOR THREE YEARS BY WILTON!

ATTACH THIS AD TO YOUR LETTERHEAD FOR FREE DEMONSTRATION OR LITERATURE!

WILTON
TOOL MFG. CO., INC.
Dept. NED-10 SCHILLER PARK, ILLINOIS

Wilton Vises Are Sold By Leading Distributors Everywhere

For more details circle NED-957 K7 on enclosed inquiry slip

SHELDON

It's Just Good Sense to Use Sheldon Lathes

Closer Tolerances. Sheldon Lathes work to closer tolerances . . . have accuracy guaranteed by the individual check sheet which accompanies each lathe and proves that that lathe has passed Sheldon's 19 accuracy tests. Continued accuracy is insured by hand scraping the headstock, carriage and tailstock to the ways; by using "Zero Precision" tapered roller spindle bearings, etc.

Extra Work Capacity. Sheldon 10", 11" and 13" Lathes have large 1" collet capacity, a 1⅝" hole through the spindle, 54 pitch gear boxes, large motors, cogged V-belts to spindle, etc. etc., and come in a choice of pedestal, cabinet or bench mountings.

Production Versatility. Sheldon Lathes are easily converted to ideal, high speed, production lathes with the addition of bed turrets, taper attachments and other production accessories.

Profitable. Sheldon Lathes are the right size for most toolroom and production jobs. Low in initial cost, they are inexpensive to operate and are profitable to use. It's just good business to be equipped with Sheldon Lathes.

Write for Catalog

SHELDON MACHINE CO., Inc.
4215 N. Knox Avenue, Chicago 41, Illinois

For more details circle NED-958 K7 on enclosed inquiry slip

Cut ANY Shape in Metal...

with a BEVERLY THROATLESS SHEAR!

- Capacities to 3/16" in mild steel
- Make clean, knurl-free cuts in any metal to capacity
- High Carbon High-Chrome Blades
- Built to last a lifetime

Here's What a Beverly Can Do!
Cuts made in 18 ga. metal with Model B-1

Beverly Shears are the most versatile metal shearing tools you can use. Unique shoulder design permits any cut . . . rack and pinion gives great power with little effort. Alloy steel body for maximum rigidity and strength. Made in 4 models.

Write for illustrated circular —or see your Beverly Distributor.

Beverly SHEAR MFG. CO.
3016 W. 111th Street Chicago 43, Ill.

For more details circle NED-959 K7 on enclosed inquiry slip

No threads...
JOIN PLAIN-END PIPE

Ideal for fuel, coolant, air lines on compressors, heavy machinery, pumps and other original equipment. You'll get a permanent joint in just 30 seconds with this easy-to-join fitting. There's no threading, exact pipe fitting or alignment needed. Resilient rubber gaskets in the Dresser Style 65 give you permanent protection against vibration, normal expansion and contraction stresses that spring leaks in other joints. Sizes ⅜" to 2".

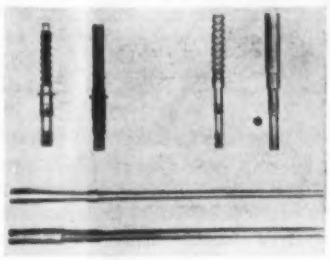
Complete line of couplings, tees, ells, etc. Write for catalog.

DRESSER®
MANUFACTURING DIVISION
30 Fisher Ave., Bradford, Pennsylvania

For more details circle NED-960 K7 on enclosed inquiry slip

New Processes & Materials

COLD REDUCING METHOD
produces steel blanks outlined to size and shape of finished part

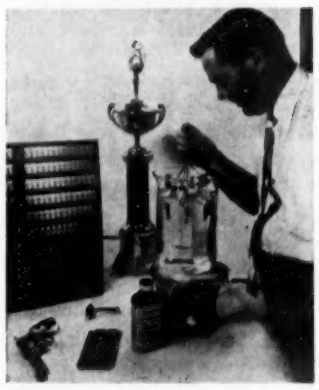


Carbon, alloy, or stainless steel blanks which closely match the shape and size of the finished part are produced by the Republic Die-Form process which cold-reduces hot rolled steel bars. A finishing cut or grinding is all that is required. Die-Form parts can be used in place of bar stock in sizes up to 42 in. long and 2 in. in diameter. Multidiameter machine shafts are typical of parts mass-produced by this process.

Process involves pushing dies over the die form blank from opposite ends to the desired distance and stripping them off again. Operation is repeated on either or both ends if further reductions are required. Process holds diameters to within 0.005 in. and lengths of shoulders or step downs to within 0.0625 in. Straightness can be held to 0.005 in. Photo shows two auto steering worm shafts and a rifle barrel produced by Die-Forming. Developed by **Republic Steel Corp.**, Bolt & Chain Div., 1970 Carter Rd., Cleveland 13, Ohio.

For more details circle NED-961 K7 on enclosed inquiry slip

GOLD PLATING
24-carat coating applied by dipping



Coat of 24-carat gold imparted to metal parts by the Atomex dipping process is reportedly more permanent than electroplatings. Process requires no current or special equipment, and works by ionic displacement. Base metal surface sheds atoms into the bath which are replaced by gold atoms from the bath. Compared to electroplating, coating is denser, achieving the same appearance with 35 per cent less gold. Even blind recesses receive a uniform deposit. Gold actually interlocks with base metal for a firm bond. Analytical control of bath is unnecessary, and all gold in the bath can be used up. Coatings up to 10 millionths thick can be applied to most metals. Developed by **Baker & Co.**, Electrochem Dept., 113 Astor St., Newark 2, N. J.

For more details circle NED-962 K7 on enclosed inquiry slip

In Your Plant
THERE ARE PICTURES LIKE THIS

If YOU HAVEN'T CHANGED TO THE SABIN BARREL TRUCK

Sabin ONE MAN way of handling barrels and drums saves labor.

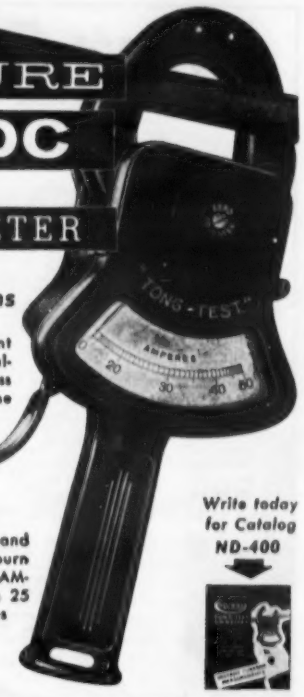
This method is simple. You run truck up to container, hook on at top and pull back on handle to pick up loads weighing as much as 800 pounds.

Third Wheel Feature gives better balance—and makes handling safer, too.

WRITE FOR BULLETIN NO. 48-A
Sales representatives wanted in several territories.
THE SABIN MACHINE CO.
6536 Carnegie Ave.
CLEVELAND 3, OHIO

For more details circle NED-963 K7 on enclosed inquiry slip

MEASURE AC and DC WITH ONE AMMETER
without electrical connections



TONG TEST is the only instrument of its type that measures both alternating and direct current. Press trigger and snap tongs around the electrical conductor for an instant reading, without shutting down equipment. Interchangeable ranges up to 1000 amperes; impossible to read the wrong scale.

Rugged and dependable, safe and accurate. No coils or wires to burn out. Thousands of TONG TEST AMMETERS in use after more than 25 years of active service. Five types available for conductors up to 3⅞" diameter, or bus bars up to 4½" x ½".

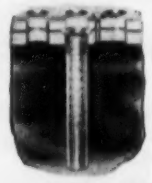
Write today for Catalog ND-400

COLUMBIA
COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave.
CLEVELAND 14, OHIO

For more details circle NED-964 K7 on enclosed inquiry slip

Micro-Inch

Yes—



Delpark Filter-Matic

TUBULAR SCREEN VACUUM FILTER

5-1000 G.P.M. Flow Rates

The Filter-Matic gives filtration for super-finish grinding requirements with automatic, permanent element filtration.

Keeps coolant clean, free of contaminants . . . coolant temperature is lowered. Extends grinding wheel life, permits free-cutting action.

Write for more complete information on this newest concept in filtration.

Delpark —First in Filtration Advancement

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

For more details circle NED-965 K7 on enclosed inquiry slip

Here's the answer to your baking operation problems!

Send for this FREE Book on how to cut costs with Fostoria Radiant Ovens

You will refer to this handy reference book on infrared industrial baking equipment time and again! It shows you how you can apply the money-saving advantages of Fostoria Radiant Ovens on baking, drying, dehydrating, degreasing and preheating . . . tells how you can speed up production, improve product quality, reduce operating and maintenance costs.

Typical case histories (detailed and illustrated) of plants such as yours prove the amazing savings of Fostoria Ovens. Your *free* copy of "Applications Unlimited" is waiting. Send for it today.

INFRA-RED fostoria SYSTEM

5512

Components to Complete Ovens
THE FOSTORIA PRESSED STEEL CORP.
Dept. 1008 • Fostoria, Ohio

For more details circle NED-966 K7 on enclosed inquiry slip

Inducto Furnaces...

HIGHER PRODUCTION — LOWER COST

Unique design features plus precision control are the reasons why inducto furnaces offer you faster, more efficient and more economical production. All the inherent advantages of induction heating have been maintained in inducto furnaces while design changes have been incorporated to speed production and lower costs.

Inducto furnaces feature:

- Sturdy welded frame construction minimizes distortion . . . increases lining life.
- Compact, precision control saves floor space and gives highly-accurate, stepless control through all heating cycles.
- Water-cooled leads introduced through trunion, the area of least movement, reduce flexing . . . ensure longer life. Leads are also shorter, cutting power losses.
- Controls designed for simplicity of operation and accessibility of selector switches.
- Lower installation costs with no furnace pits to dig, less bus bar to buy and install, and control shipped ready to operate.

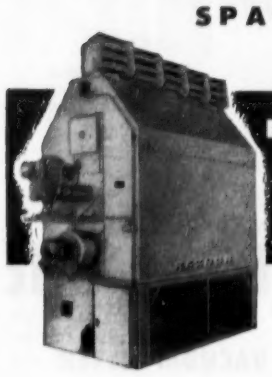
Send today for Bulletin 70.

INDUCTOTHERM CORP.

412 Illinois Ave. • Delanco, N. J.

For more details circle NED-967 K7 on enclosed inquiry slip

HERE'S A NEW ANSWER TO INDUSTRY'S SPACE HEATING PROBLEMS



REZNOR-OLSON STAINLESS STEEL DIRECT-FIRED HEATERS

- 10 sizes, 400,000 to 2,000,000 BTU
- gas, oil or dual-fuel burners
- free-standing or suspended installation; easily adapted for use in duct systems
- quick and easy to install —just make fuel, electric and vent connections
- completely automatic operation
- practically no maintenance required
- ideal for primary or supplemental heating in all types of industrial building, new or old
- write for free bulletin giving complete details and specifications

REZNOR

WORLD'S LARGEST-SELLING DIRECT-FIRED UNIT HEATERS

Reznor Manufacturing Company, 41 Union Street, Mercer, Pennsylvania

For more details circle NED-968 K7 on enclosed inquiry slip

SOUTH BEND

- FAST
- ACCURATE
- DEPENDABLE

- High output with close tolerances.
- Fast—easy to operate.
- Ideal for second operations.
- Versatile—easily tooled.
- 48 each of longitudinal, cross and thread cutting feeds.
- Power feed turret ram.
- 13 1/8" swing—1 3/8" spindle hole—1" collet capacity.
- Prices start at $2438.

SEND FOR CATALOG

Turret, Engine and Toolroom Lathes; Milling Machines; Shapers; Drill Presses; etc.

Up to 24 months to pay.

SOUTH BEND LATHE • South Bend 22, Indiana

For more details circle NED-969 K7 on enclosed inquiry slip

New Processes & Materials

Coarse, Fine & Specialty Wires

Colorado Fuel & Iron Corp.—72-page catalog on line of Wickwire wire provides ordering specifications for all low carbon coarse, high carbon fine, specialty, low carbon fine, and flat and shaped wire. Descriptions of various types and grades of wire emphasize rigid testing and quality control.

For more details circle NED-970 K7 on enclosed inquiry slip

Automatic Valves & Controllers

A. W. Cash Co.—Catalog coverage of Cash Standard and Stacon lines of pressure reducing and regulating, relief, back pressure and control valves; controllers; differential regulators; oil pumping units; governors; combination and temperature regulators is given in 8-page form S-730-1. Also included are several examples of complete control systems utilizing Cash Standard units.

For more details circle NED-971 K7 on enclosed inquiry slip

Photoelectric Controls

Mason Instrument Co.—An extremely efficient optical system coupled with an unusual adjustable slit enables Cats Eye photoelectric controls to serve over 1000 different uses. The high speed, sensitive controls answer the needs of modern automation. Available folder gives technical data, prices and a partial list of uses.

For more details circle NED-972 K7 on enclosed inquiry slip

Welding Guide

Marquette Mfg. Co.—"Guide to Better Welding" provides 40 pages of on-the-job reference information on all types of welding. It tells what rod to use for any job, how to use each rod and what amperages to use. Booklet also includes a cause-and-solution trouble chart, a table of steel hardness numbers and a rod comparison chart.

For more details circle NED-973 K7 on enclosed inquiry slip

Industrial Trucks & Attachments

Hyster Co.—The right truck and attachment for practically every mechanical handling application is covered in 12-page guide 1491. Details are provided on lift trucks with capacities from 1000 to 20,000 lb, a mobile crane with 10,000 capacity at 30 in. reach, and straddle carriers of 20,000 and 30,000 lb capacities. An industrial tractor and a platform truck are also described.

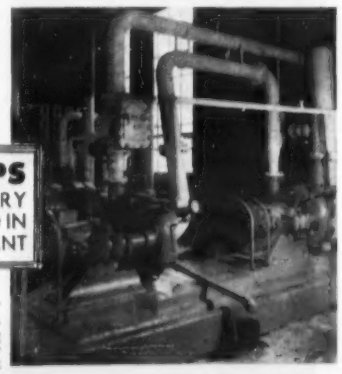
For more details circle NED-974 K7 on enclosed inquiry slip

Industrial Tires

B. F. Goodrich Tire Co.—36-page illustrated guide book 7-8350-GT explains all phases of industrial tire use and provides specifications of all tire types. The Goodrich line includes tires for all types of materials handling equipment: solid tires, pneumatic tires, semipneumatics and vulcanized-on wheels. Latest industrial truck manufacturers' tire specifications are given.

For more details circle NED-975 K7 on enclosed inquiry slip

Nagle® PUMPS HANDLE SLURRY AGAINST 400' HEAD IN MODERN POWER PLANT



Two Nagle 4" type "T" pumps, in a two stage installation, are ably handling 600 GPM of fly ash slurry against 400 ft. of head, at Windsor plant of Beech Bottom Power Co., Power, W. Va. Water-end parts are of abrasion resistant ABK Ni-Hard nickel iron alloy.

Design of the Nagle type "T" pump provides quick slippage seal adjustment, accessibility of stuffing box and split bearing stand. Entire pump can be quickly dismantled, but it's seldom necessary because it's a Nagle Pump—built for gritty, abusive jobs—pumping abrasive and corrosive materials or hot liquids.

SEND FOR CATALOG S206

NAGLE PUMPS

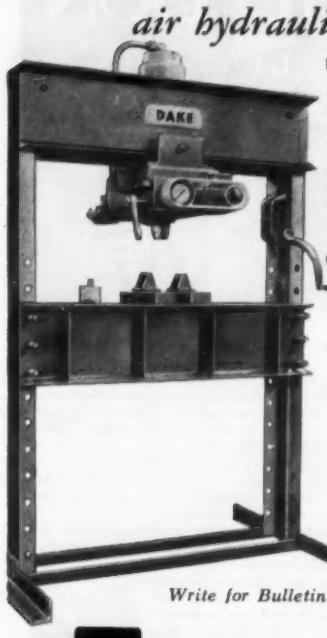
NAGLE PUMPS, INC.

1265 CENTER AVE., CHICAGO HEIGHTS, ILL.

PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

For more details circle NED-976 K7 on enclosed inquiry slip

A NEW LINE OF DAKE air hydraulic PRESSES



FOUR NEW MODELS

25, 50, 75, 150 TONS

. . . tonnagewise and pricewise are designed to find many applications in a wide range of manufacturing fields. Only requirement for operation is the availability of compressed air.

CHECK THESE FEATURES:

- Rapid Ram Approach—automatically changes to power stroke when it contacts the work.
- Extra Long Stroke—handles long pressing jobs more easily.
- Movable Workhead—self-contained, easy to center over work. Workhead can be purchased separately.
- Modern Design—all of the operating controls are at convenient working height.

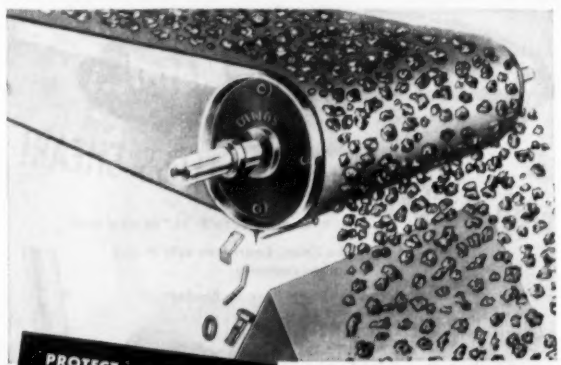
Write for Bulletin 391

DAKE PRESSES

DAKE CORPORATION

642 Seventh St., Grand Haven, Mich.

For more details circle NED-977 K7 on enclosed inquiry slip



PROTECT crushers, screens, grinders, all processing machinery from tramp iron damage.

REMOVE contaminating iron particles from materials and products.

PREVENT fires and explosions caused by sparks from tramp iron.

with DINGS PERMA-PULLEYS

Dings *permanent* Alnico Magnetic Pulleys are designed with high surface strength to provide tremendous holding power for large, machine-wrecking pieces of tramp iron. They also assure powerful attraction for pulling fine particles of contaminating iron out of materials on conveyor belts. Separation at full production volume is *positive* and *automatic*.

Dings

Get full details from Bulletin C-1007A.

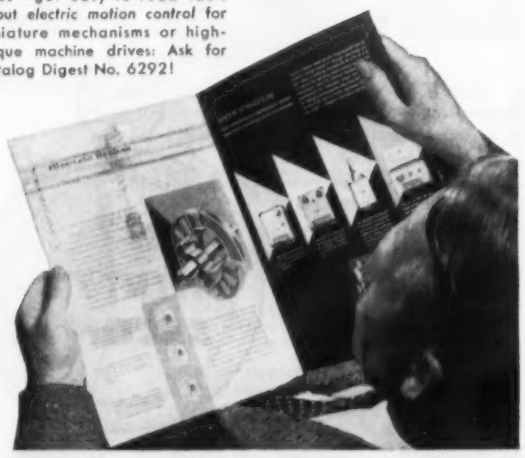
DINGS MAGNETIC SEPARATOR CO.

4758 W. Electric Ave., Milwaukee 46, Wis.

For more details circle NED-978 K7 on enclosed inquiry slip

FACTS about electric brakes and clutches

Just off the press—attractive new booklet in digest form, free. Find out about Warner's unique features—get easy-to-read facts about *electric motion control* for miniature mechanisms or high-torque machine drives: Ask for Catalog Digest No. 6292!



WARNER

Pioneers of

ELECTRIC BRAKES AND CLUTCHES

Industrial Division

Warner Electric Brake & Clutch Co., Beloit, Wis.

For more details circle NED-979 K7 on enclosed inquiry slip

GREENLEE PRECISION BORING AT LOW COST

Model C-4 HYDRO-BORER

Offers precision boring quality at low cost. Easily mounted on any type of base. Fixtures can be mounted on face of machine.

Quick, easy setups. Rugged, fast, dependable. Designed to produce to the accurate requirements of fine tool work.

Model C-4 HYDRO-BORER
WRITE FOR COMPLETE INFORMATION

GREENLEE
GREENLEE BROS. & CO.
2250 MASON AVENUE
Rockford, Illinois

For more details circle NED-980 K7 on enclosed inquiry slip

HOW TO CUT VALVE COSTS

on corrosive services

You'll save maintenance, replacement and down time dollars when you specify Rockwell-Nordstrom *lubricated* plug valves. The combination of corrosion resisting metal *plus* lubricant protection means that they will do a better flow control job, longer, and at lower cost than any other valve you've ever used.

The pressurized lubricant in Rockwell-Nordstrom valves assures a continuous, leakproof seal that stays tight on even the most corrosive services . . . costly reseating problems are eliminated. Lubricant also forms a tough protective film on the working surfaces and stops metal-to-metal wearing friction.

Rockwell-Nordstrom valves are available in a full range of sizes and pressure ratings in semi-steel, steel, stainless steel, bronze, Monel and other corrosion resisting metals. They cost no more, often less, to buy than ordinary valves. Write for complete details. Rockwell Manufacturing Company, Pittsburgh 8, Pa. *Canadian Valve Licensee:* Peacock Brothers Limited.

ROCKWELL-
Nordstrom
VALVES

Lubricant Sealed For Positive Shut-Off

For more details circle NED-981 K7 on enclosed inquiry slip

New Processes & Materials

HIGH PRESSURE AIR HOSE
wire braided for 1500-psi pressures

Developed for use in conjunction with compressors and pneumatic equipment on construction and industrial jobs, Acme Gold Seal air hose is flexible, wire-braided type for handling pressures to 1500 psi. It consists of a thick, oil-resistant neoprene tube, one or two-strand wire braid, and an abrasion-resistant hard rubber covering. Sizes range from ½ to 2½-in. ID. Made by **Acme Rubber Mfg. Co.,** Dept. PG-60, 115 Meade St., Trenton 3, N. J.

For more details circle NED-982 K7 on enclosed inquiry slip

METAL STRIPPING COMPOUND
removes plated deposits

Combined with sodium cyanide and dissolved in water, Iso-Strip chemical stripping compound will strip plated deposits from ferrous-base metals without use of electric current. It removes copper, nickel, cadmium, zinc and silver plating without etching the base metal. Parts can be stripped in baskets or tumbled in barrels. Required equipment includes a plain steel tank, draft box, coil and temperature regulator. Nonferrous metals are stripped at rate of about 0.001-in. in 20 minutes at temperatures of 140° F. Formulated by **Wagner Bros., Inc.,** 426 Midland Ave., Detroit 3, Mich.

For more details circle NED-983 K7 on enclosed inquiry slip

CONCRETE HARDENER
seals and protects surface

Used to aid in curing new concrete as well as to seal and maintain old floors, Treet Creet is easily applied. It penetrates to a depth of ⅛-in. Applied to new concrete as soon as it is dry enough to support a man's weight, coating seals the surface and dries in 6 to 8 hours. Floor can then be used for traffic. While controlling curing, it prevents dusting and penetration of dirt, oil or other matter. Used on a cleaned old concrete floor, coating dries in 20 to 60 minutes. It seals the surface against oil, paint, dirt, acids, alkalies and other destructive agents. It also is reported to seal below-ground-level floors from moisture penetration from below. Made by **Magee Chemical Co.,** 325 W. Main St., Bensenville, Ill.

For more details circle NED-984 K7 on enclosed inquiry slip

10 power FLAW FINDER

Quick-focusing illuminated magnifier—removable handle is a pocket flashlight. $8.95—with leather case, $12.45

40-50-60 power
"PEN" MICROSCOPE

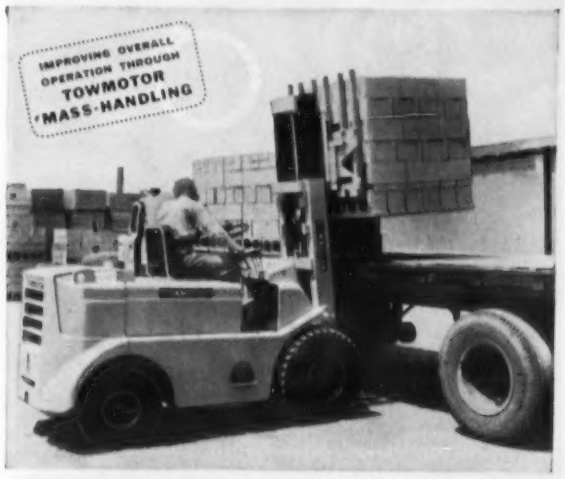
Pen size precision instrument with magnification equal to large lab models. With leather case, $17.50

Orders shipped immediately

WRITE TODAY for illustrated literature.

Since 1927—manufactured in the U.S.A. by—
E. W. PIKE & CO., INC.
492 North Ave., Elizabeth, N. J. • ELizabeth 2-0630

For more details circle NED-985 K7 on enclosed inquiry slip



12 New Towmotor Features!

Have you seen the new Towmotor Fork Lift Trucks lately? They offer the industry's most significant advances in modern low-cost mass-handling. Write for bulletin SP-23 describing 12 new improvements including:

- New pace-setting comfort features
- New power-to-spare engines
- New positive-response hydraulic lift
- New one-piece all-welded frame
- New "easy-off" hinged hood
- New improved TowmoTorque transmission

TOWMOTOR -GERLINGER
THE ONE-MAN-GANG

TOWMOTOR CORPORATION • Cleveland 10, Ohio

For more details circle NED-986 K7 on enclosed inquiry slip

Drill Hardened Steels without Annealing—

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—
With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

"HARDSTEEL"

For more details circle NED-987 K7 on enclosed inquiry slip

Gage small parts quickly and economically with the KODAK CONTOUR PROJECTOR, Model 8

Here's a portable, bench-type comparator that gives you the speed, economy, and precision of optical gaging at moderate cost. With little training, operators can inspect all sorts of stampings, screw machine and similar parts completely, accurately, and quickly.

The Model 8 can be used for either vertical or horizontal projection with the shadow image always erect and right-reading. Interchangeable lenses give a choice of any of six for magnifications from 10× to 100×.

For details on the Kodak Contour Projector, Model 8, and how you can use it, send for the booklet, "Projection Gaging with Kodak Contour Projectors." Write *Apparatus and Optical Division.*

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

Kodak

For more details circle NED-988 K7 on enclosed inquiry slip

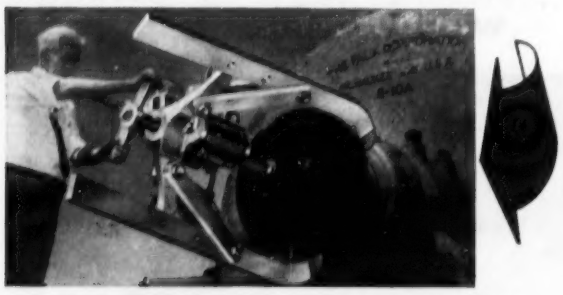
Internal, external and open-type INDUSTRIAL Retaining Rings are available in many sizes, metals and finishes, standard and bowed. Let our engineering staff help you to simplify your fastening applications and product assembly. Send your drawings, problems or questions for recommendations without obligation. Ask, too, for free catalog and samples.

IRR *Originators of modern retaining ring dispensing*

INDUSTRIAL RETAINING RING COMPANY
Dept. N10, 57 Cordier Street • Irvington 11, New Jersey

For more details circle NED-989 K7 on enclosed inquiry slip

IMPOSSIBLE UNTIL OTC PULLED IT!



This giant speed-reduction unit sat unused 2 years in a Detroit factory yard because the flange was "frozen" to the shaft. Nothing moved it — until an OTC Grip-O-Matic — with **100 tons** of hydraulic "muscle" behind it — eased the flange off.

OTC Grip-O-Matics are forged of special steels with a jaw design that can't slip off the work — the harder they pull, the tighter they grip.

Such OTC hydraulic tools — Grip-O-Matics, Push-Pullers, rams — are finding increasing use in maintenance and repair departments — and on production lines, too. OTC Power-Twin rams—available in four sizes from 17½- to 100-ton capacities — are designed for near or remote control. OTC manual, electric and gasoline pumps fit all OTC rams, give plenty of power to do the "impossible" jobs **fast.**

OTC *For detailed information and free bulletins write*
OWATONNA TOOL COMPANY
436 Cedar Street Owatonna, Minnesota

For more details circle NED-990 K7 on enclosed inquiry slip

For more details circle NED-991 K7 on enclosed inquiry slip

New Literature & Catalogs

Liquid Handling Components

Wheaton Brass Works—100-page catalog No. 65 covers loading arm assemblies, loading valves, swing joints, truck tank equipment, storage tank fittings, and miscellaneous products for the efficient handling of bulk liquids. Offered to buying and specifying officials in the petroleum, chemical, aviation, and other industries, this guide book also contains complete engineering information.

For more details circle NED-992 K7 on enclosed inquiry slip

Roller Bearing Pillow Blocks

Dodge Mfg. Corp.—The complete line of Spher-Align spherical roller bearing pillow blocks is described in 8-page illustrated bulletin A-668. Data are tabulated on all units, and design details are given on the Micro-Mount which assures accurate seating of bearings on shafts, improved spherical roller bearing design, system of lubrication, triple labyrinth seals, and close-grained semisteel housings.

For more details circle NED-993 K7 on enclosed inquiry slip

Oilless Bearings

Arguto Oilless Bearing Co.—The complete line of Arguto self-lubricating oilless bearings for roller conveyors and screw conveyors is described in 24-page catalog No. 240. Specifications and operating characteristics of standard roll conveyor bearings as well as self-sealing, free-draining, and conical bearings for use on belt, live roller, gravity roller, and special conveyors are tabulated.

For more details circle NED-994 K7 on enclosed inquiry slip

Granular Materials Conveyor

Brady Conveyors Corp.—The Flo-Veyor pneumatic system for moving dry pulverized and fine granular materials into and out of plants, as well as for unloading hopper bottom cars is subject of 8-page brochure. Materials are moved by air fluidization principle.

For more details circle NED-995 K7 on enclosed inquiry slip

Machine Tool Setup System

Universal Vise & Tool Co.—The Clamp-N-Jack setup system for use with boring mills, planers, milling machines, presses, and drill presses is subject of 8-page booklet 557. System consists of series of support tubes, adjustable swivel bases, and couplings. Typical applications on various types of machine tools are shown.

For more details circle NED-996 K7 on enclosed inquiry slip

Wholesale Motor Book

W. W. Grainger, Inc.—140-page wholesale "Motor Book" features the complete 1957 line of electric motors and related items stocked by this company. Also described are power plants, blowers, pumps, power tools, pneumatic equipment, and related industrial equipment.

For more details circle NED-997 K7 on enclosed inquiry slip

Specify NAYLOR PIPE and PIPE FITTINGS

TO SPEED THE JOB AND CUT COSTS

- WATER LINES
- AIR LINES
- GAS LINES
- COMPRESSED AIR LINES
- VENTILATING LINES
- PROCESS LINES
- PNEUMATIC CONVEYORS
- SLUDGE LINES
- VACUUM LINES
- DRAINAGE LINES

Here is a lightweight pipe with extra strength and safety to handle jobs normally requiring heavier-wall pipe. Its exclusive spiral-lock construction acts as a continuous expansion joint—absorbs shock loads, stresses and strains. Sizes range from 4" to 30" in diameter. All types of fittings, fabrications and connections including one-piece Naylor Wedge-lock couplings to speed installation and cut costs. Available in steel, alloys and stainless steel.

Write for Bulletins No. 507 and No. 525

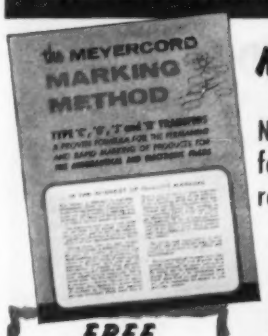
NAYLOR

Naylor Pipe Company
1247 East 92nd Street
Chicago 19, Illinois

Eastern U. S. and Foreign Sales Office
60 East 42nd St.,
New York 17, N. Y.

For more details circle NED-998 K7 on enclosed inquiry slip

MEYERCORD LICKS TOUGHEST PRODUCT MARKING PROBLEMS!



FREE
MEYERCORD MARKING METHOD
We've just published new data about Meyercord Types C, G, J, & H (heat resistant) nameplate markings, designed to meet the challenge of the most difficult surfaces. For your free copy, please write on company letterhead.

***New* MEYERCORD**
TYPES C, G, J, and H.
Name plate markings designed for heat, abrasion, weather resistance and new finishes

Heat . . . abrasion . . . weather and many of the new surfaces are deadly enemies of most types of product markings. But not to the new improved Meyercord Markings, Types C, G, J and H (heat resistant). Depending upon the surface and the conditions of use one of these new-type Meyercord Markings will, by actual test, almost certainly solve the problem. For exact recommendations designed to meet your special requirements, drop us a note outlining the problem, along with an actual sample of the surface. This service is offered without obligation of any kind.

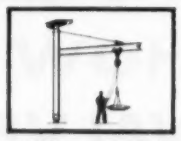
THE MEYERCORD CO.
World's Largest Decalcomania Manufacturers
Dept. N-316
5323 W. Lake St.
Chicago 44, Ill.

For more details circle NED-999 K7 on enclosed inquiry slip

CONCO JIB CRANES
versatile and inexpensive

Where space and budget are both limited, CONCO self-supporting, wall and mast-type jib cranes have a wide application—on the loading platform, in the warehouse, machine shop or foundry. CONCO jib cranes may be furnished with CONCO hand or electric hoists and are available with floor plate or embedded mounting.

CONCO wall bracket jib crane


CONCO mast-type jib crane

CONCO ENGINEERING WORKS
Division of H. D. CONKEY & COMPANY
57 Grove Street • Mendota, Illinois
AFFILIATES Conco Engineering Works-Domestic Heating Equipment
Conco Building Products, Inc., Brick, Tile, Stone

For more details circle NED-1000 K7 on enclosed inquiry slip

WITH
BENNETT WASTE RECEPTACLES

Cleanliness is automatic by conveniently placing Bennett Waste Receptacles to invite their use. Yes, "litter bugging" is eliminated with these easy-to-use, sanitary and economical waste receptacles. Put them to work reducing your cleaning costs and increasing neatness.

Wherever people gather there is a logical location of Bennett Waste Receptacles —America's most complete line including self-closing and drop-in models. Write today for catalog and prices.

WRITE FOR FULLY ILLUSTRATED CATALOG

BENNETT SELF-CLOSING WASTE RECEPTACLES available in 12 models

BENNETT MANUFACTURING COMPANY, INC.
ALDEN, N. Y.
Bennett Bilt is Better Bilt

For more details circle NED-1001 K7 on enclosed inquiry slip

RUST PROTECTION

COSTS LESS WITH marvellum VPI

SAVE TIME, LABOR AND MATERIALS

Superiority of Marvellum VPI is evident when you consider:
- No more corrosion rejects
- Easier and faster to use
- Lower packing costs
- Lower shipping costs
- No clean-up time

Rust-free storage up to ten years is possible with Marvellum VPI.

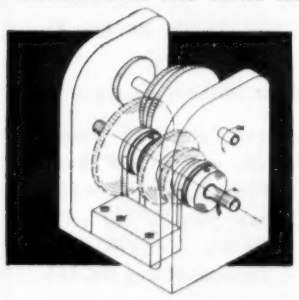
FREE
Informative brochure on VPI complete with wide range of samples. Write Dept. 11-A.

THE MARVELLUM COMPANY
HOLYOKE, MASSACHUSETTS

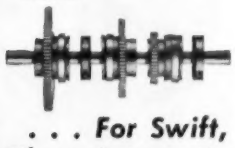
For more details circle NED-1002 K7 on enclosed inquiry slip

Simplatrol

MINIATURE AND SMALL ELECTRIC CLUTCHES & BRAKES



3-speed transmission Composed of gears actuated by miniature Simplatrol Clutches.



. . . For Swift, Silent Automatic Speed Selection

Electric Speed Selection is a key function in automated operation, and Simplatrol Electric Clutches and Brakes are providing extremely swift, silent, economical speed selection in varied installations in instrumentation.

PRECISION MANUFACTURED

Simplatrol miniature and small electric clutches and brakes are precision made to close tolerances. There are no sliding parts to wear. The patented diaphragm is the only moving part in the actuation of the clutch and brake. Design is simplicity itself; operation is trouble free.

Ask for recommendations on Simplatrol units for your clutching, braking or speed selection operations.

Simplatrol products corp.
24 SALISBURY ST., WORCESTER, MASS.
Representation in Key Industrial Areas

For more details circle NED-1003 K7 on enclosed inquiry slip

every day, designers are discovering new ways to make products better, more efficient...with

Precision manufactured from DuPont Nylon Resin to close tolerance of ±.001 on diameters and .0005 on sphericity, Ace Nylon Balls give **design flexibility** and **production economy.** Light in weight . . . tough at low temperatures . . . stable at high temperatures . . . resistant to corroding chemicals such as sulphuric acid, etc. . . almost abrasionproof . . . these mass-produced balls have hundreds of industrial applications. Come in 14 standard sizes from 1/8" to 3/4". Complete facilities for fabrication of plastic parts for all industries. Estimates submitted promptly on receipt of blueprints or specifications.

Write for samples, bulletin, price list TODAY.

ACE PRECISION NYLON BALLS

ACE PLASTIC COMPANY
Extrusion Molders and Fabricators
91-28 Van Wyck Expressway, Jamaica 35, N. Y. • JAmaica 3-5500

For more details circle NED-1004 K7 on enclosed inquiry slip

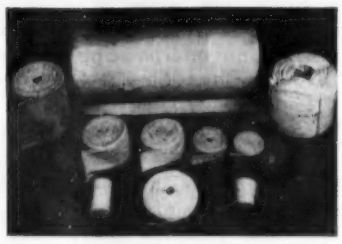
New Processes & Materials

LAMINATED CHALKBOARD offered in two grades

Minimum life of 20 years, absence of haloing or ghosting, minimum of glare, and ability to withstand repeated washing with water are features of Formica Chalkboard, offered in two grades. Standard high pressure laminate Formica Chalkboard surfacing is about 1/32-in. thick and is offered in sizes from 3 x 5 ft to 4 x 10 ft. Special grade with same surface has a thin sheet of steel laminated in so that magnetized posting devices can be used. Thickness is about 1/16-in. and sheet sizes are limited initially. Material in sheet form is supplied for attaching various recommended backing materials for final installation. Without backing materials it can be installed over worn out chalkboards with Formica fast drying contact bond cement. Board is also resistant to solvents used to remove crayon or other waxy or greasy markings. Made by **Formica Corp.**, 4408-A Spring Grove Ave., Cincinnati 32, O.

For more details circle NED-1005 K7 on enclosed inquiry slip

CERAMIC FIBER TEXTILES withstand temperatures over 2000° F



Roving, yarn, cord, rope, woven tape, broadwoven fabrics, and other textile forms are now available in Fiberfrax ceramic fiber, an aluminum silicate material that withstands over 2000° F. Weight range is from 15 to 74 oz per sq yd. Made from staple fiber yarns in various weaves and constructions, the fabrics have good insulating properties due to low thermal conductivity, high yarn bulk, and natural resilience. Some constructions are reinforced with stainless steel or nickel-chrome alloy wire for greater tensile strength in the 1000-2000° F range. Applications include blankets, gaskets, filter media, protective clothing, conveyor belts, and heat and flame barriers. Made by **Carborundum Co.**, Dept. NED, Box 337, Niagara Falls, N. Y.

For more details circle NED-1006 K7 on enclosed inquiry slip

TEXTILE LABEL releases without leaving adhesive

Problems of adhesive residue and paper splitting adhesion are eliminated with use of Imac Tex label paper for textiles. The peelable label paper with heat-seal adhesive clings to all types of fabrics with sufficient tenacity to withstand repeated flexing and rough handling. No adhesive residue remains after intentional peeling. Application can be to various natural and synthetic fabrics. Made by **Nashua Corp.**, 36 Franklin St., Nashua, N. H.

For more details circle NED-1007 K7 on enclosed inquiry slip

SCREEN TROUBLE-MAKERS OUT OF PIPELINES

LOW-COST

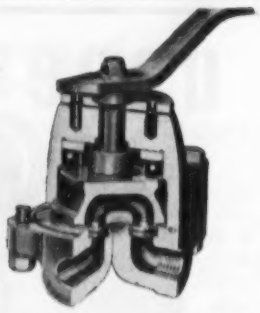
Remove troublesome scale, grit, sediment from pipelines. Prolong the life of pumps, valves, traps, meters. Install *low-cost* Anderson Strainers. Sizes 1/4" through 3". Pressures up to 250 p.s.i. Temperatures up to 450°F. Specials upon application. Prompt shipment from stock.

Write for FREE Bulletin 252, The V. D. Anderson Company, division of International Basic Economy Corporation, 1958 West 96th Street, Cleveland 2, Ohio.

ANDERSON STRAINERS

For more details circle NED-1008 K7 on enclosed inquiry slip

NO CREEPING CYLINDERS



Manual Shear-Seal valves (250, 1500, 3000 and 6000 P.S.I.) are leakproof and stay leakproof for years of service with little or no maintenance; no internal port to port leakage in the detented positions and, of course, no external leakage. Sealing qualities actually improve with use, due to wear compensating lapping action of "Shear-Seals."

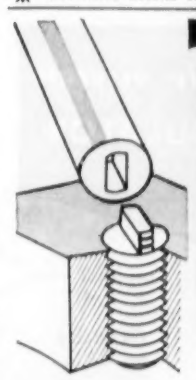
You get excellent throttling, smooth action to any degree of flow without fighting the fluid pressure.

Quick as a quarter turn of the handle you can open the full flow (or shut it off) with surge dampening action, because the round tubular passages have no spools or poppets obstructing flow.

BARKSDALE VALVES
5125 Alcoa Avenue, Los Angeles 58, California

Ask for bulletin 5-H, -A and -W.

For more details circle NED-1009 K7 on enclosed inquiry slip



GREATER HOLDING POWER at LESS COST with Setko SLABBED HEAD SET SCREWS!

- *Takes 50% more torque* than comparable hexagon socket set screws
- *Costs Less* than hexagon socket set screws of same metals
- *Holds Better*, tighter, won't slip
- *Fully Threaded*, can be flush mounted
- **Nu-Cup® or standard points* available
- *Can be automated* with our Hopper Feeding method
- *Self Locking* with Zip-Grip® thread, or Crest-Lok, if needed

You Cut Costs Way Down When You Automate
Experience has proven that insertion rates of Slabbed Head Set Screws can be greatly increased when *automated* by Setko's revolutionary Hopper Feeding Systems.

WRITE TODAY for full information . . . and ask for Catalog 21 which describes the complete Setko line of Set Screws.

The Set Screw & Mfg. Co. 130 Main Street, Bartlett, Illinois

For more details circle NED-1010 K7 on enclosed inquiry slip

"Muscle Savers" for Handling Sheet Metal, Heavy Dies or Parts...

Weld-Bilt HYDRAULIC LIFT TABLES

Easily lifts loads up to 10 tons – to heights from 26" to 42" — for production handling. Hydraulically operated through foot pump or electric operation controlled by foot switch, or push button. With or without wheels. Write for prices and bulletins. For information on our complete line write us or our nearby representative.

"Weld-Bilt" PRODUCTS

Hydraulic Lift and Pallet Trucks — Automatic and Portable Elevators — Conveyors — Drum Elevators — Skids — Special Equipment.

WEST BEND EQUIPMENT CORP.
MATERIALS HANDLING ENGINEERS
311 WEST WATER STREET • WEST BEND, WIS.

For more details circle NED-1011 K7 on enclosed inquiry slip

dependable

ANCHOR CONVEYOR TROLLEYS

Engineered for longer life and greater economy, ANCHOR Improved Conveyor trolleys are backed by 30 years of conveyor experience. These trolleys are interchangeable with other leading makes, have protected lubrication fittings, baffle type grease seals, hardened and ground races, and caged ball bearings. Write for Bulletin 56-2.

ANCHOR STEEL & CONVEYOR CO.

6906 KINGSLEY AVE. • DEARBORN, MICHIGAN

For more details circle NED-1012 K7 on enclosed inquiry slip

Large-capacity, extremely accurate

DEVILBISS AIR REGULATOR

Leakproof

Fingertip adjustment

Compact size 3" x 4½"

Capacity 80 c.f.m.

DeVilbiss HAA Air Pressure Regulator. Two-stage control provides easy knob setting, sensitive regulation, less pressure drop. Offers extreme accuracy wherever controlled air pressure is needed. Regulates pressures up to 135 lbs., with only ½-lb. variation for each 10-lb. fluctuation in main line pressure! No large, heavy springs! Two inlets and three outlets (⅜" female N.P.T.) allow for any type installation. Write for details.

DEVILBISS — THE DEVILBISS COMPANY Toledo, Ohio

Barrie, Ontario • London, England

For more details circle NED-1013 K7 on enclosed inquiry slip

POR-ROK (POUR ROCK)

Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN **30 MINUTES!**

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 75th ST. • CLEVELAND 13, OHIO SINCE 1937

For more details circle NED-1014 K7 on enclosed inquiry slip

New Literature & Catalogs

Radiant Heat Metal Processing

Fostoria Pressed Steel Corp.—Eighteen typical applications of radiant heating equipment in metal processing are described in capsule case-history form. Product heating problems, processing temperatures, time cycles and oven design are covered. Processing involves baking, heating, drying or degreasing functions.

For more details circle NED-1015 K7 on enclosed inquiry slip

Overhead Electric Cranes

Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Div.—The novel method employed in 26-page bulletin 15005-1-57 to catalog 16 overhead electric cranes in up to 20-ton capacities facilitates selection of the exact crane for the job. Crane spans range through 80 ft.

For more details circle NED-1016 K7 on enclosed inquiry slip

Drafting Shortcuts

Frederick Post Co.—"Time Savings Tips for the Draftsman and Engineer" is title of 34-page booklet which compiles 59 tips and drafting shortcuts suggested by leading engineers and draftsmen. Suggestions include remembering trig functions, dividing a circle into parts, locating decimal points, constructing an approximate ellipse, determining gear inertia and interpolating between family of curves.

For more details circle NED-1017 K7 on enclosed inquiry slip

Work Benches & Shop Accessories

Sturdi-Bilt Steel Products, Inc.—Many innovations and expansions in company's work bench and shop accessories line are described in 12-page catalog 357. Line now includes heavy duty unit work benches, heavy duty pedestal and continuous work benches, general service benches, a wall-mounted folding bench and utility table, bench drawers, steel risers, steel backs and end rails, illuminators and power-strips, adjustable and multiple-drawer shop tenders.

For more details circle NED-1018 K7 on enclosed inquiry slip

Drill Chuck Catalog

Supreme Products Corp.—Revised general catalog 274 lists specifications of over 40 models of drill chucks. Chuck arbors, keys, keyholders, adapters and repair parts are also shown. Also featured is the Pro Versamatic reversible speed reducer for power drills and the Push-Pull Tapper, a drill attachment made expressly for tapping.

For more details circle NED-1019 K7 on enclosed inquiry slip

Rivets, Burrs & Staples

Cobb & Drew, Inc.—Besides listing the complete line of rivets, burrs, washers and staples, 20-page catalog shows the facilities and manufacturing techniques for producing a wide range of ferrous and nonferrous items. A handy decimal equivalents chart is provided on back cover.

For more details circle NED-1020 K7 on enclosed inquiry slip

HARDNESS TESTER

portable and precise!

A Riehle sales engineer will *prove* — in your own plant, on certified calibrated specimens — that a Riehle portable gives Rockwell readings of "bench tester" accuracy. Make tests on your own materials too. See how this portable saves carrying unwieldy pieces to a bench for testing.

FREE BULLETIN . . . WRITE DEPT. NED-1057

Riehle TESTING MACHINES
A DIVISION OF
American Machine and Metals, Inc.
EAST MOLINE, ILL.

For more details circle NED-1021 K7 on enclosed inquiry slip

AN ORDERLY SYSTEM

FOR FILING · STORING · SEGREGATING

TRACINGS BLUE PRINTS SHEET MATERIAL

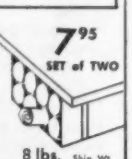
FILE CONSTRUCTED IN 200-lbs-Test CORRUGATED CONTAINER

25 TUBE Model 2½" I.D.			2530	2536	2542
49 TUBE Model 1¾" I. D.	49AB	49CD	4939	4936	4942
DEPTH	11¼"	22¼"	30½"	36½"	42¼"
PRICE	$6.25	$8.35	$10.85	$11.95	$12.85
SHIPPING WEIGHT					
MOD. 25	——	——	13 lbs.	15 lbs.	17 lbs.
MOD. 49	8 lbs.	12 lbs.	15 lbs.	18 lbs.	20 lbs.

JR 36

DESIGNED TO MOUNT UNDER BOARD-MOUNTING BRACKETS FURNISHED. GRAY ONLY

7.95 SET of TWO



SOLD IN SETS ONLY — 2 JR36 PER SET

8 lbs. Ship. Wt.

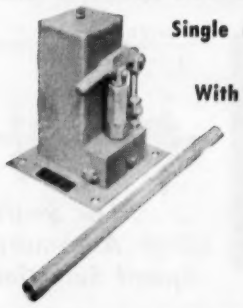
ENAMELED DARK GREEN OR MED. GRAY — State Color

F.O.B. FRASER, MICHIGAN • PRESCOTT 3-2515 • SOLD DIRECT ONLY

ROLL & FILE SYSTEMS, INC. • P.O. BOX 3863, DETROIT 5, MICH.

For more details circle NED-1022 K7 on enclosed inquiry slip

HAND HYDRAULIC PUMP



Single and Double Designs to 20,000 Psi

With or Without Reservoir

160 Cubic Inch Reservoir with 8" x 8" Base Plate. Optional Size Piston: ⅜", ½", ¾", 1". Handle length: 18 inches. Catalog No. 160

We specialize in hand pump units to operate in temperatures from minus 65F to plus 160 F and with any capacity reservoirs required.

The single pump with ½" or ¾" piston now available in stainless steel.

WILLIAM S. PINE

Hydraulic Hand Pumps for 1001 Uses

1635 E. 22nd St., Los Angeles 11, Calif.

For more details circle NED-1023 K7 on enclosed inquiry slip

ONLY NEW HALLOWELL *ERECTOMATIC* STEEL SHELVING gives you all these plus features

- Fast assembly
- Fast shelf change or addition
- Straight-in, straight-out shelf change
- Independent shelf positioning
- Full use of shelf area
- Common side panels and posts
- Beaded posts and flanged shelves
- Full-depth shelf supports
- 4 classes of shelves

Investigate Hallowell ERECTOMATIC® before buying shelving. You'll find it easy to assemble and rearrange, economical to maintain. It is made of prime steel, is phosphate coated and finished in SPS green baked-on enamel. Other colors are available. Hallowell ERECTOMATIC is sold through leading industrial distributors and shop equipment dealers. Write us for complete information. Hallowell Shop Equipment Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.

HALLOWELL SHOP EQUIPMENT DIVISION SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-1024 K7 on enclosed inquiry slip

Assembly Ready

GEARS

to do the work intended!

Right from the beginning . . . slamming starts . . . shock loads . . . all are taken in stride because IG gears are delivered Assembly Ready . . . ready to go to work without pre-fitting or breaking in. All this is made possible because tolerances are held closer at Industrial Gear. Let IG become your one-source-of-supply Gear Department.

Write for complete, FREE "Gear Packet" showing Industrial Cut Gear products, applications, and services.

INDUSTRIAL GEAR MFG. CO.

4521 W. Van Buren St. • Chicago 24, Ill.

For more details circle NED-1025 K7 on enclosed inquiry slip

REED the Better CHAIN VISE

Low profile of improved design creates less interference with work area.

Modern vise has handle positioned so that it swings above bench level for tightening. Chain drops into position and locks automatically on all pipe sizes. Hardened, replaceable vise jaws have three faces for triple life. Vise mounts solidly on bench, 50% closer to edge with full 6 inches or more bearing on edge. Reed exclusive roller pulley provides maximum chain contact. This really solid vise is easier, faster and more convenient . . . does away with fumbling and skinned knuckles. Reed presents performance advantages never before incorporated in any chain vise design.

ASK YOUR SUPPLIER OR WRITE FOR FREE LITERATURE.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA, U. S. A.

For more details circle NED-1026 K7 on enclosed inquiry slip

DUNDICK

C-R-A-S-H-E-S THE PRICE BARRIER on Top-Quality Plug Gages!

DUNDICK DE LUXE
Double-End, Reversible-Pin STEEL PLUG GAGES 2" LONG

NOW ONLY $1.25 each in lots of 10 or more. Asst. Sizes.

ALL THE FEATURES OF PRECISION GAGES COSTING MANY TIMES THIS PRICE!

- Oil-hardened Swedish-type Tool Steel
- Actual Precision-Ground Plug Gages — not just Drill or Reamer Blanks
- 720 Different Sizes — .030 to .750 in increments of .001
- Reversible when worn — twice the accurate gaging life

CAN BE PURCHASED INDIVIDUALLY OR IN SETS

GUARANTEED ACCURACY! Tolerances guaranteed plus or minus fifty millionths.

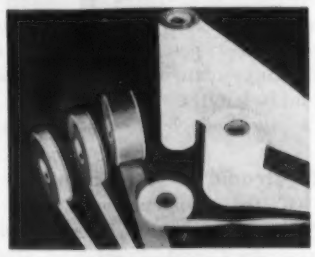
ORDER TODAY—or write for more information

DUNDICK TOOL WORKS, INC.
"The Precision Gage for the Atom Age"
3410 West 31st Street • Chicago 23, Ill.

For more details circle NED-1027 K7 on enclosed inquiry slip

New Processes & Materials

TEFLON TAPE
now available in colors



Ten colors of Teflon tape, in thicknesses of 0.001 to 0.125 in., are available for application coding and identification. The Polypenco tape meets NEMA and MIL-STD-104 requirements and possesses basic Teflon tape properties. It has dielectric constant of 2.0, resistivity of 10^{15} ohm-cm, temperature range of −320 to 500° F, zero water absorption, and is chemically inert. Minimum average dielectric strengths range from 6000 v per mil on 1-mil tape to 600 v per mil on 125-mil tape. Made by **Polymer Corp. of Pennsylvania,** 2140 Fairmont Ave., Reading, Pa.

For more details circle NED-1028 K7 on enclosed inquiry slip

SOUND & VIBRATION DEADENER
nontoxic coating is anticorrosive

No. 42 sound and vibration deadener and anticorrosive coating can be used any place where there is a metal-produced noise, whether it be tinniness, drumming, or clang and bang. Developed for use on steel surfaces, it is nonflammable, nontoxic, nonexplosive, odorless, and stable. It has a uniform high flow rate at 40 to 70° F, requires low pump and atomization pressures, is lump-free and nonsettling, dries without blistering or sagging, and has a low curing time. Made by **Philip Carey Mfg. Co.,** Dept. NED, Lockland, Cincinnati 15, Ohio.

For more details circle NED-1029 K7 on enclosed inquiry slip

CORROSIONPROOF PIPE
lined with chemically inert Teflon

Lining of Fluoroflex-T - S corrosionproof pipe and fittings is a high density Teflon compound called Fluoroflex - T1001. It is chemically inert at temperatures up to 500° F, except for molten alkali metals and fluorine at elevated temperatures and pressures. Pipe and matching fittings handle caustics and all hot acids, including hydrofluoric and aqua regia. Jacketing is schedule-40 seamless steel pipe with 150-lb ASA flanges threaded and welded at each end. Available are 1, 1½, 2, 3, and 4-in. sizes, with 6-in. size to be offered soon. Elbows (45 and 90-degree) are now available, with tees, crosses, and reducers in development. Made by **Resistoflex Corp.,** Dept. NED, Roseland, N. J.

For more details circle NED-1030 K7 on enclosed inquiry slip

STOPS PIPE THREAD LEAKS

PAT. PENDING

Satisfaction Guaranteed Or Money Back TRIAL OFFER

TRU-O-SEAL Fittings are guaranteed to seal pipe thread connections permanently against all oils, practically all known chemicals and gases; to seal under high pressures or vacuum; to withstand —280° to plus 500° F.; to eliminate "overtightening" damage and pipe dope. Available in ⅛" to 2½" pipe thread sizes.

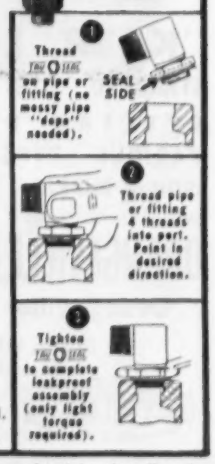
$10.00 Trial Offer No. 1: eight ⅛", ten ¼", eight ⅜", ten ½" pipe thread TRU-O-SEAL Fittings.

$10.00 Trial Offer No. 2: eight ½", ten ¾", four 1" pipe thread TRU-O-SEAL Fittings.

Send order to

TRU-O-SEAL DIVISION
Flick-Reedy Corp

2023 N. Hawthorne, Melrose Park, Ill.
"Miller Fluid Power" is also a Div. of Flick-Reedy Corp.



For more details circle NED-1031 K7 on enclosed inquiry slip

These Rubber-Cushioned,
MULTI-USE STOCK ABRASIVES DO THE WORK OF SPECIALS....

GIVE A COMPLETELY NEW, WIDER CONCEPT OF ABRASIVE APPLICATIONS

Abrasive grains and "cushioning" rubber, evenly dispersed through Brightboy's compound, work simultaneously to BURR, CLEAN, FINISH, POLISH in one operation.

Ask your dealer for Brightboy recommendations and for the Brightboy Catalog listing grains, textures, machine speeds, applications. Write us if he cannot supply you or on any problem in which finishing is involved.

TIME SAVINGS
Works to close tolerances
Can be shaped to contour
Produces conventional and special finishes and patterns, frequently the final polish
No before-use preparation or dressing
No skilled labor required

GENERAL USES
Removing light digs, tool and heat marks
Cleaning welded and soldered joints
Burring and finishing castings, stampings, machined and molded parts
Maintenance of tools and machinery

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th Street Newark 7, N.J.
America's Pioneer Manufacturer of Rubber-Bonded Abrasives

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

For more details circle NED-1032 K7 on enclosed inquiry slip

JENKINS U-BOLT GATES

Priced no higher DESIGNED TO COST LESS TO USE

WIDE CHOICE: Inside Screw and O. S. & Y., patterns . . . Iron Body with Bronze or Stainless Steel Mounting, All Iron, Ni-Resist with Type 316 Stainless Steel Trim. GET FOLDER NO. 207 about the complete line. Ask your local Jenkins Distributor, or write Jenkins Bros., 100 Park Ave., New York 17.

Built right into a Jenkins U-Bolt Gate Valve are dollar-saving features no other can match. Construction superiorities that equip this valve to take punishment longer. Features that cut maintenance time and the cost of replacement parts.

A good example is the unique, Renewable Bonnet Saver Bushing which is a patented feature of Inside Screw valves. No need to junk a bonnet with worn operating threads. Just slip in a new bushing for good-as-new thread engagement . . . saving bonnet and lengthening spindle life.

JENKINS VALVES

LOOK FOR THE JENKINS DIAMOND

JENKINS SINCE 1864 Jenkins Bros

Sold Through Leading Distributors Everywhere

For more details circle NED-1033 K7 on enclosed inquiry slip

EVERYTHING UNDER CONTROL with GUARDIAN STEPPERS

The PROGRAMMER

• reliable • rugged • long-life

● Guardian offers this new, compact, rugged, long-life, highly reliable Programming Stepper which meets and exceeds MIL-S 25259 (Proposed). Approved and used for control of guided missile and in-flight equipment, it is available now for a wide variety of control engineering projects including automated production systems, machine tools and industrial products. Use it singly, or in combination with Guardian relay matrixes, control banks and in complete control assemblies as the "heart" of your unit. Open or sealed, it operates under extreme temperatures, high altitude and severe vibration or shock. Carries 8-12-18 or 24 points sealed or unsealed; up to 16 wafers and unlimited switching arrangements.

Thousands of Variations in Guardian's Complete Stepper Line

Write for Programmer details and for Stepper Bulletin P-84

GUARDIAN ELECTRIC
1626-L W. WALNUT STREET CHICAGO 12, ILLINOIS

For more details circle NED-1040 K7 on enclosed inquiry slip

Save Cable Wear, Power Interruption

with Gleason SPRING Reels

A special Gleason SHO Retrieving Reel wherever you supply power to equipment in motion will save its cost in cable expense, improved efficiency! Keeps cables safely out of the way — prevents twisting and traffic damage. Provides two-way payout, continuous electrical contact, watertight protection — for cables and cords up to 400 Amps, 600 Volts, in capacities of up to 350 feet. If you have a cable control problem — stretch, lift, or retrieve — it costs you nothing to check on GLEASON benefits. Write for Catalog or engineering recommendations.

Gleason Reel Corp
738 N. Plankinton Ave., Milwaukee 3, Wis.
SPRING REEL HEADQUARTERS FOR ALL INDUSTRY

For more details circle NED-1041 K7 on enclosed inquiry slip

SEND FOR DETAILS ON...

Schrader® AIRLINES, FITTINGS AND FERRULES

Everything you need for planning, fitting and installing your own airline hookups

Make compressed air connections that are neat and efficient, to fit your exact needs. You can plan them and install them yourself. For instance: Use Schrader oil-resistant synthetic rubber hose, cut to your specs with the fittings you need. Or buy the hose and fittings separately to make any combination you want. Seal with safe, air-tight Schrader ferrules.

SEND FOR ALL THE TECHNICAL LITERATURE YOU NEED

A. SCHRADER'S SON
Division of
Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue
Brooklyn 38, N.Y.

For more details circle NED-1042 K7 on enclosed inquiry slip

New Literature & Catalogs

Alloy Centrifugal Castings

Sandusky Foundry & Machine Co.—Custom-made centrifugal castings, produced in more than 70 alloys such as stainless steel, Monel, cupro-nickel and copper-base types, are described in 12-page catalog 200. Castings can range in diameter from 7 to 54 in., and in lengths to 33 ft.

For more details circle NED-1043 K7 on enclosed inquiry slip

Electronic Test Instruments

Keithley Instruments, Inc.—Vacuum tube voltmeters, electrometers, meg-megohmmeters, micro-microammeters, and direct and alternating current amplifiers are detailed in 24-page catalog B. Included are 22 schematic diagrams, typical application circuits, design details, and an application summary.

For more details circle NED-1044 K7 on enclosed inquiry slip

Vibratory Parts Feeders

Vibratory Feeder Co.—Vibratory parts feeding units described in 10-page folder 5742 include new test and development units which are equipped with independent control panels. The new feeder is actually four machines in one, in that the base vibrator accommodates four different bowl sizes from 10 to 30 in. diameter. Standard bowl blanks are shown and specified.

For more details circle NED-1045 K7 on enclosed inquiry slip

Pneumatic Production Tools

Airetool Mfg. Co.—Grinders, sanders, drills, reamers, screwdrivers, nutrunners, filing and cutting tools, and accessory items comprise pneumatic production equipment shown in bulletin 63. All tools have the Airetool air motor which features a balanced rotor and power seal to assure constant power under heaviest operating loads.

For more details circle NED-1046 K7 on enclosed inquiry slip

Custom-Built Industrial Structures

Abell-Howe Co.—Executives interested in building a new plant, warehouse, office, or converting present plant facilities can get a look at some of the many structures custom-engineered and built by this company in the past 30 years. Brief description is given in this 32-page brochure of each building. Company's precast concrete panel construction is pictured.

For more details circle NED-1047 K7 on enclosed inquiry slip

Cutting Tools

Madison Industries Inc.—Data on line of cutting tools and equipment provided in new catalog include diagrams, instructions for use, setup suggestions, and how-to-order information. Adjustable boring and reaming tools, bottoming tools, trepanning tools, gun-type drills, spade and core drills, adjustable bore gages, and grinding arbors are covered. Newly introduced are a gun-type drilling machine, coolant systems, and coolant inductors.

For more details circle NED-1048 K7 on enclosed inquiry slip

FLOOR TRUCKS

"KEEP LOADS ALIVE"

STANDARD SIZES & TYPES
SPECIAL DESIGNS
VARIOUS TYPE WHEELS:
IRON - RUBBER - PNEUMATIC

Write for catalog

ORANGEVILLE MFG. CO.
Orangeville 12, Pa.
"Since 1879"

FLOOR TRUCKS ORANGEVILLE

For more details circle NED-1049 K7 on enclosed inquiry slip

FAMOUS Palley CATALOG JUST OFF THE PRESS

396 PAGES PACKED WITH BARGAINS

ALL NEW 1957 CATALOG... GREATER THAN EVER BEFORE FULLY ILLUSTRATED

THOUSANDS UPON THOUSANDS OF INDUSTRIAL, COMMERCIAL AND CONSUMER ITEMS AT GREATER SAVINGS THAN EVER BEFORE! New Merchandise! Top Quality GOV'T SURPLUS!

Industrial & Building Supplies – Electrical Equipment – Motors, Generators, Portable Power Plants, Hand & Power Tools, Hardware, Fans & Blowers, Heating & Ventilating Equipment, Office Equipment to list but a few PLUS the GREATEST SELECTION of HYDRAULIC SUPPLIES we have EVER ASSEMBLED. Cylinders, Pumps, Valves, Motors, Fittings, Hose, etc., in genuine Gov't Surplus as well as our own high quality, custom made line. Its all in this amazing catalog!

ORDER YOUR COPY TODAY!

SAVE 2500LB. LIFT HOIST
Ideal for use in garage, shop, boat yard, farm, on trucks, etc. Has bronze, worm gear drive with 26 to 1 gear ratio and 3-speed crank. Comes with 18 feet of 3/16" high tensile strength, steel cable and free-spool, pull-out clutch. ... 34.95
MOUNTING FRAME – for above Hoist 4.50
NOTE: We carry a complete line of hoists from small portables to huge, heavy duty types. Write for details.

NEW HYDRAULIC PRESS CYLINDERS
Specially designed for press work. Sturdy tie-rod construction. Operates at 3000 PSI. Has 2-1/2" shaft.

Part No.	Bore	Stroke	Length	Price Each
PS-6-30	5"	4"	10½"	$ 89.50
PS-8-30	5"	8"	14½"	105.00
PG-6-30	6"	4"	10½"	107.50
PG-8-30	6"	8"	14½"	127.50

The 5" diameter cylinders above will develop up to 30 TONS THRUST at 3000 PSI. The 6" diameter cylinders up to 43 TONS. Check others in our stocks.

UNIVERSAL JOINTS
Has a heavy duty, solid cast Bronze body. Rotates from 90° to 180° as desired. Has 29/32" diameter steel shafts with a ball and socket joint. In excellent condition. Ready-to-use!!! 5.95
Write TODAY for complete list of many other types of universal joints, hoists, hydraulics, etc.

SPECIAL 180° OFFSET DRIVE
For use where tremendous power at a low take-off RPM is desired. Has 6 gears rotating on self-lubricating, hi-speed roller bearings. 85 to 1 gear ratio. Shafts are 1/1-1/4" and 3/8" diameter.
USED in good condition ONLY 5.95
NEW in excellent condition ... NOW 8.95

SAVE ON STEEL CABLE

ALLOY STEEL
Finest quality Alloy Steel cable. Rust & corrosion resistant.

Size	Price per Ft.
7 x 7 STRAND	
1/16"	5¢
3/32"	6½¢
7 x 19 STRAND	
1/8"	9½¢
5/32"	16¢
3/16"	12½¢
1/4"	13½¢
9/32"	16½¢

STAINLESS STEEL
Aircraft Quality. Rust & Corrosion Proof. You can not beat this Bargain.

Size	Price per Ft.
7 x 19 STRAND	
1/16"	7¢
3/32"	14¢
5/32"	21¢
3/16"	23¢
7/32"	29¢
1/4"	38¢
5/16"	47¢

SAVE ON NEW NYLON ROPE
Very Finest Nylon Rope. Top Quality. Available in Sizes of 1/8" to 1" diam. Prices as low as 5¢ per running foot.

Palley's 2263 E. Vernon Ave. Dept. NED-10, Los Angeles 58, Cal.

Order From This Ad. Pay by M.O. or check. P.O.'s accepted from O&B firms. ½ deposit with C.O.D.'s. All Prices FOB Los Angeles.

For more details circle NED-1050 K7 on enclosed inquiry slip

protect your records...

in a DIEBOLD ledger tray safe

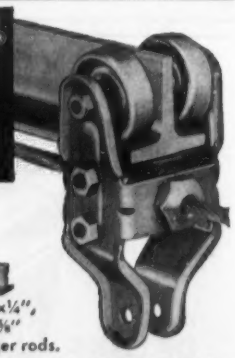
A low-cost Diebold Ledger Tray Safe gives you complete protection for your vital records . . . the highest standards of economy and efficiency. Regardless of record sizes, ideal working height is always maintained. Easily made adjustments quickly adapt units to size and weight of ledgers. Present trays can often be used.

Diebold mobile Ledger Tray Safes will provide point-of-use fire protection for ledger records . . . improve posting efficiency . . . reduce costs. For complete information, write today.

Diebold INCORPORATED
When it comes to record protection, Diebold has the answer.
1008 Mulberry Rd., S.E., Canton 2, Ohio

For more details circle NED-1051 K7 on enclosed inquiry slip

TIPP "Cable-Way" Conveyors
Cable conveyors since 1938



VERSATILE ATTACHMENTS

Simple change from locked to swinging position — many hanger designs available.

Track is 2"x2"x¼", suspended by ⅝" threaded hanger rods.

3 trolley capacities: 80-150 & 250 lbs.
Same trolley — change wheels only.

Low cost, easy to move, lightweight

Rugged all-bolted construction — easy to rearrange. Propelled by a driving corner sprocket (cast iron) which engages in drive lugs (steel) in pitch on a continuous cable. Write for catalog and engineering manual.

TIPP-TRONIC Overhead Conveyor Control

No need for shear pins, etc. Can be set for any load limit. Includes warning prior to shut-off.

Compact 180° idle corners of cast aluminum 15¼", 22⅛" or 30⅛" dia.

Vertical dip-standard 60° or 90° included angle. Charts showing work clearances at dips and inclines available.

WRITE TO TIPP MANUFACTURING CO.
Tipp City 7, Ohio

INVENTORY IN MOTION WITH ... Tipp ...
A FULLY ENGINEERED PRODUCT

For more details circle NED-1052 K7 on enclosed inquiry slip

NEW! COMPACT POWER SWEEPER Priced for Small Plant Budgets!

Priced as low as $1475

Here's the answer for efficient power sweeping for plants of all types and sizes. The new WAYNE "704" power sweeper is smaller yet engineered to sweep faster, better.... in and around tight spots, closer to machinery and equipment.

Superior features in every way—

1. No dust bag to empty. Dust-free operation.
2. More effective dirt hopper capacity.
3. Powered and geared for all sweeping conditions.
4. Longer-wearing brushes get all the dirt.
5. Vacuum cleaning attachments available.

For literature or demonstration write:

new WAYNE '704'

WAYNE MFG. CO. · 1377 E. Lexington Ave., Pomona, Calif.
World's Largest Producer of Power Sweepers for Cities and Industry

For more details circle NED-1053 K7 on enclosed inquiry slip

Pump-don't slop INDUSTRIAL LIQUIDS

Get rid of antiquated methods such as pouring, drawing, siphoning, spigoting. Install Tokheims! These high-vacuum pumps are invaluable in maintenance and production work; they help build a barrier against fires and accidents, halt waste, speed production, and improve housekeeping.

Tokheims deliver up to 20 gallons per 100 strokes. No piston to leak, stick, or freeze. Available with hose or spout outlets.

Call your dealer, or Tokheim representative; write for literature—and approved liquid list.

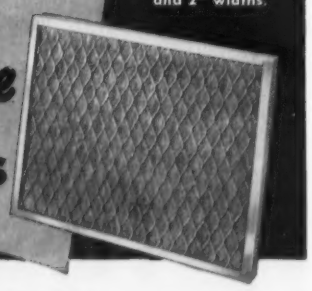
General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT
1656 Wabash Avenue SINCE 1901 Fort Wayne 1, Indiana
Subsidiaries: Tokheim N.V., Leiden, Holland—GenPro, Inc., Shelbyville, Ind. Factory Branch: 475 Ninth Street, San Francisco 3, California In Canada: Tokheim Reader of Canada, 705 Yonge St., Toronto, Ont.

QUALITY TOKHEIM HIGH VACUUM HAND PUMPS

For more details circle NED-1054 K7 on enclosed inquiry slip

save **money** on air cleaning with **Alum-O-Aire** permanent, dry-type **FILTERS**

All standard sizes ½", 1" and 2" widths.



OUTLASTS ORDINARY FILTERS— CUTS MAINTENANCE EXPENSE, TOO!

Here's the filter you can depend on for efficient, economical service on any air cleaning task. ALL metal construction withstands years of use under normal conditions. Washes clean with water, yet it *won't* rust. Fireproof. Requires no oils or adhesives. Aluminum wool media does *ALL* the filtering. No more expensive solutions to buy; ends pyramiding replacement filter costs. Available with copper wool media for use in corrosive atmospheres.

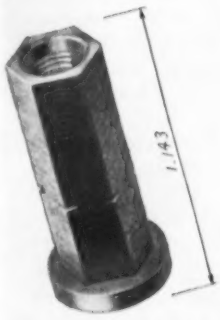
Write for free folder and performance data.

Carey Electronic Engineering Co.
METAL WOOL DIVISION
1893 Clifton Avenue, Springfield, Ohio

For more details circle NED-1055 K7 on enclosed inquiry slip

New Processes & Materials

MACHINING PROCESS eliminates secondary machining



Second and third operations are eliminated on special types of screw machine work by the Synchro-automatic machining process. Cross drilling, milling, slotting, threading, broaching, and burnishing can be done in one operation. Tolerances to 0.0003 in. are possible. Service offered by **A. G. Kaddis Screw Products Co.**, 314 Hudson Ave., Rochester 5, N. Y.

For more details circle NED-1056 K7 on enclosed inquiry slip

RADIATION BARRIER is lead-filled epoxy formulation

Developed for all industrial applications that require a high-density casting compound, Maraset Resin 341 is a lead-filled epoxy formulation. Because it is effective as a barrier against radiation, it can be used to construct shields for nuclear installations and containers for shipping radioactive materials. It can be furnished with lead loadings up to 95 per cent by weight. Dimensionally stable and having negligible shrinkage, it pours easily for casting intricate shapes. When mixed with a catalyst, it sets after a brief room-temperature cure. Smooth surface does not require finishing. It resists oxidation, corrosion, and contamination by most chemicals. Made by **Marblette Corp.**, Dept. NED, 37-31 30th St., Long Island City 1, N. Y.

For more details circle NED-1057 K7 on enclosed inquiry slip

PROTECTIVE METAL COATING is weatherproof and decorative

Adhering to galvanized and other smooth metal surfaces without cracking, chipping, or peeling, Derusto galv-a-grip protective coating is weatherproof. Applicable to new or old, even rusted, surfaces, finish can be sprayed, brushed, or rolled on. It primes as it protects, and is available in white, light gray, and red in ½-pint to 55-gallon drum sizes. Made by **Master Bronze Powder Co.**, Dept. NED-857, 538-548 W. State St., Calumet City, Ill.

For more details circle NED-1058 K7 on enclosed inquiry slip

NEW LOW COST LEAK DETECTOR

NRC Model 4902 detects and locates leaks as small as 10^{-6} standard c.c. per second. It is the first commercially available halogen-sensitive leak detector to have the stability and fast recovery time needed to assure reliable results. Operates in the 80-200 micron pressure range. Readily available Freon-12 is used as tracer.

It is useful for locating leaks in vacuum and pressure vessels, as well as for such products as auto-radiators, water buckets, hydraulic systems, and hermetically sealed components and assemblies.

Write today for Bulletin LD-1
Department 29-K

NRC EQUIPMENT CORPORATION

NRC Equipment Corporation
160 Charlemont Street
Newton 61, Mass.
A subsidiary of National Research Corporation

For more details circle NED-1059 K7 on enclosed inquiry slip

toughest scoops and shovels *made*

WOOD'S **Moly** BRAND

Mo-lyb-den-um alloy blades

Pat. Steel I-Beam Prevents Handle Breakage

Workers like them for hang, balance, and perfect finish... and they last 2 to 3 times as long as other grades. Blades guaranteed uniform gauge, hardness, and tensile strength. Guaranteed not to split or crack. Guaranteed uniform quality 12 to the dozen. Cheapest shovels you can buy for long hard service, and workers take care of tools they like.

THE WOOD SHOVEL & TOOL CO.
Piqua, Ohio

For more details circle NED-1060 K7 on enclosed inquiry slip

RE-application

most uses don't require it, but if you need it 5 times...10 times...15 times, the M·F TWO-WAY LOCK NUT IS YOUR LOW-COST ANSWER!

M·F TWO-WAY ALL METAL DOUBLE CHAMFERED LOCK NUT

You owe it to your product and to your production manager to find out about the LOCK NUT THAT DELIVERS: 1. Reapplication. 2. Automated application without selective devices. 3. Locking power without using all threads. 4. *Consistent* torque—no "spins," no "sticks" no line hold-up. 5. LOW COST!

SEND FOR FREE CATALOG. The M·F line includes off-the-shelf-sizes in all semi-finished hexagon nuts, all types of all metal lock nuts, weld nuts and the M·F UNI-TORQUE LOCK NUT. All specifications, torque tests etc., included. Yours for the asking:

MAC LEAN-FOGG *Lock Nut Company*
8535 NORTH WOLCOTT AVENUE, Chicago 40, Illinois

For more details circle NED-1061 K7 on enclosed inquiry slip

A NEW DIMENSION IN DESIGN MATERIAL...

PRECISION BORE GLASS TUBING

Wilmad Offers Unheard-Of Accuracy and Low Cost

Design Engineers are constantly searching for new materials to reduce costs and improve preformance. Wilmad has helped make glass a "new" material by producing precision bore tubing of uniform accuracy with amazing tolerance limits. Wilmad Precision Bore Tubing can be used in making product components, instrument assemblies or sub-assemblies, wave guide tubes, manometers, rotameters, viscosimeters, barometers, McLeod gauges, dilatometers, burettes, dash pots, capacitors, diodes . . in virtually hundreds of precision applications in industry.

Learn how precision bore glass tubing can improve **your** product. Let our engineers help you determine how Wilmad Glass Tubing can solve your design problems.

Write for our **new** bulletin on Precision Bore Tubing.

WILMAD GLASS CO., INC.
Landisville, New Jersey

For more details circle NED-1062 K7 on enclosed inquiry slip

There's an Easier Way!

Break away from old fashioned cutting methods . . . save time, temper and patience. Now . . . zip through 3/16" aluminum, Fiberglas, plastics, plastic laminates, even 16-gauge steel, with minimum effort . . . maximum speed . . . with the KETT Panel Master Saw. Its performance is outstanding on metal laminates such as Mirawal, Motiwal, Met-L-Wood and Amorply. Two-inch diameter saw blades give full ⅝" depth cut. Leaves accurate, smooth milled edge that requires no sanding or finishing. Amazingly easy to use . . . extra rugged for long, hard service.

Powered by heavy duty, industrial type 110 volt AC/DC portable 5/16" capacity electric drill motor. Ball bearing equipped drive for smoother operation.

write for Catalog E-22

THE KETT TOOL COMPANY
5051 Madison Rd.
Cincinnati 27, Ohio

KS-3AM Panel Master Saw

For more details circle NED-1063 K7 on enclosed inquiry slip

EASIEST HAULING LEAST MAINTENANCE

Heavy wagon or implement wheels on New Departure ball bearings give the farmer the easiest, freest-rolling mounting. They require *no adjustments, no periodic greasing!* The mount is simple—no adjusting nut, no spindle threads, no separate seal to fit!

The ball bearings, thoroughly proved in high-production automotive wheels and other applications, are pressed in the hub. The hub is slipped over the spindle and retained by a snap ring—*fast, economical, simple!* Your New Departure Sales Engineer will gladly give you complete details.

NEW DEPARTURE
DIVISION OF GENERAL MOTORS • BRISTOL, CONN.

For more details circle NED-1064 K7 on enclosed inquiry slip

Continuous Threaded
STEEL ROD BY SINTZ
It Bends Cold

Sintz crt* threaded rod gives you these important time-money saving features.

• Quality—Made from #1010 CISI cold rolled steel • Smoother, More Uniform Threads • Greater Strength • Low Cost.

Try SINTZ once and you'll be convinced.

*Cold Rolled Threaded—Bends Cold

ORDER FROM YOUR MILL SUPPLY HOUSE—INDUSTRIAL JOBBER OR DIRECT FROM . . .

CLAUDE SINTZ INC.
1928 STANLEY AVENUE
DETROIT 8, MICHIGAN

STUDS • FORMED RODS • PIPE PLUGS

For more details circle NED-1065 K7 on enclosed inquiry slip

New Literature & Catalogs

Plastic Molding Data

Allied Chemical & Dye Corp., Barrett Div.—73-page illustrated handbook details the basic principles of molding and handling Plaskon urea and melamine molding compounds. Data are given for use by molders as well as by designers and engineers.

For more details circle NED-1066 K7 on enclosed inquiry slip

Stainless Steel Information

Allen Mfg. Co.—"Stainless Steel Data" is title of 16-page bulletin No. G-22 which lists characteristics of three major types of stainless steel and explains their advantages in various applications. Section is devoted to special finishes and treatments available on Allen stainless steel Hex-Socket screws.

For more details circle NED-1067 K7 on enclosed inquiry slip

Electric Heaters

Turbine Equipment Co., Hynes Electric Heating Div.—Various hook-ups of electric heaters and heat requirement nomographs for storage tanks handling viscous fluids are content of 8-page illustrated bulletin 202A. Heaters range up to 600 kw or higher. They are shown in various services.

For more details circle NED-1068 K7 on enclosed inquiry slip

Copper-Nickel Resistance Alloy

Hoskins Mfg. Co.—Improved Copel copper-nickel resistance alloy for use on "cold" resistor applications in electronic devices and instruments is described in illustrated 8-page booklet M-56C-N. It has mechanical stability and low coefficient of resistance. Specifications on 54 wire sizes and 31 ribbon sizes are given.

For more details circle NED-1069 K7 on enclosed inquiry slip

Self-Lubricating Bearings

Johnson Bronze Co.—Stock sizes of Ledaloyl self-lubricating powder metal bearings are listed and described and their specifications given in 6-page folder JBL-13. Plain cylindrical, flanged, and self-aligning spherical types are covered. Over 400 sizes are stocked.

For more details circle NED-1070 K7 on enclosed inquiry slip

Dry Processing Equipment

Sturtevant Mill Co.—Air separators which classify free loads to 800 tons per hour, blender sand mixers, crushing and milling machines, Micronizers which provide ½ to 44-micron particles, granulators, pulverizers, and other dry processing equipment are briefly described in 8-page 1957 catalog.

For more details circle NED-1071 K7 on enclosed inquiry slip

Carbide-Tipped Saws & Tools

R. Hoe & Co., Saw Div.—24-page illustrated manual "Carbide-Tipped Saws and Tools" shows advantages of these tools in cutting wood, fiber, plastics and nonferrous materials. Brief tips are given on how to obtain optimum cutting results.

For more details circle NED-1072 K7 on enclosed inquiry slip

HOW TO BATCH OR BLEND LIQUIDS

Accurately, Safely, Automatically

Use

ROCKWELL LIQUID METERS

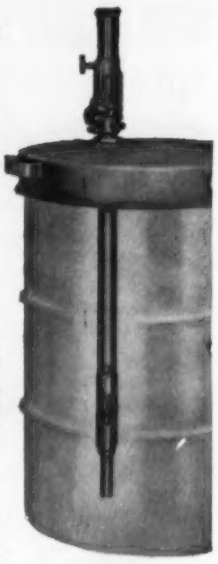
with Automatic Quantity Control Valves

This simple Rockwell system brings *automation* to the liquid process industry. To operate, you pre-set the quantity on the meter register—then open the valve. When quantity is measured, the valve closes automatically *and without shock.* This meter system eliminates human errors in compounding formulas. It's quicker and less costly than batch tanks or weigh scales . . . safer, since a closed metered piping system avoids the hazards of fumes and contamination. Available in stainless steel, bronze, steel or all-iron construction. Get full facts by writing Rockwell Manufacturing Company, Pittsburgh 8, Pa. Dept. 112K

For more details circle NED-1073 K7 on enclosed inquiry slip

All New... from Binks

17½ lb. material handling pump supplies up to 4 spray guns



Binks new "Pogo" bung-type air-operated material handling pump is "lightweight" in pounds only. In all other respects it is a rugged, dependable performer. With it you can spray finishes and coatings direct from shipping drum to product.

- Fits 2" bung hole of 55 gallon drum.
- Fastens to rim of open container with auxiliary clamp.
- Pump and agitator are available mounted on a portable drum cover. Many combinations available.
- Needs no lubrication.

Binks — EVERYTHING FOR SPRAY PAINTING

For all the facts ask your Binks representative, industrial distributor or write for Bulletin 707.

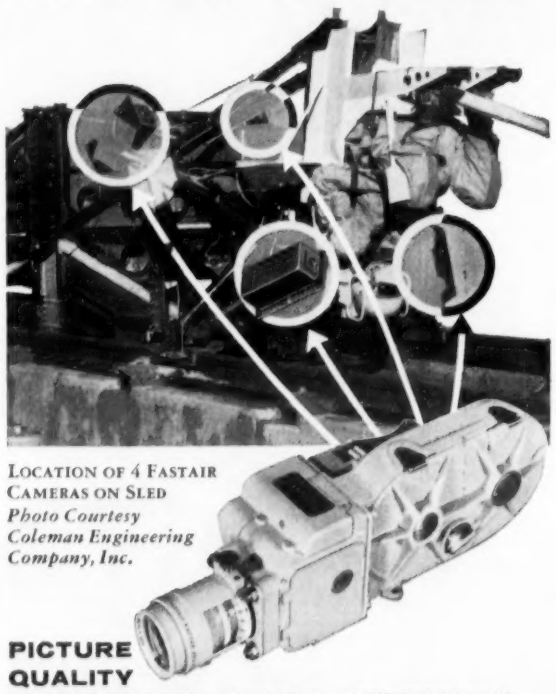
Binks Manufacturing Co.
3122-34 W. Carroll Ave., Chicago 12

7712

REPRESENTATIVES IN PRINCIPAL U.S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

For more details circle NED-1074 K7 on enclosed inquiry slip

4 FASTAIR CAMERAS RECORD ROCKET SLED TEST...



LOCATION OF 4 FASTAIR CAMERAS ON SLED
Photo Courtesy Coleman Engineering Company, Inc.

PICTURE QUALITY UNEXCELLED UNDER EXTREMELY ADVERSE CONDITIONS...

Despite the high acceleration, vibration and extreme G load of rocket sled test FASTAIR High-speed Missile Cameras recorded pictures of highest quality. Small, sturdy and compact, the FASTAIR, the first camera developed specifically for missile and rocket studies, is *unexcelled.* The FASTAIR can also be used in other fields requiring the recording of action for analyses. Speed ranges from 12 to 600 pictures per second.

• *Robert W. Drury reports the* FASTAX *camera is a credit to the photo equipment industry . . . never had a failure of any part of the camera or the very well thought out Camera Control unit. The new* FASTAIR *camera has proven to be an outstanding missile-borne camera, well designed for the job.*

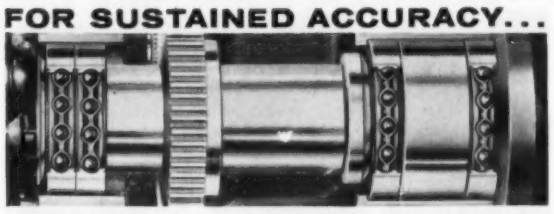
Photo Unit Supervisor, Lockheed Missile Systems Divisions, Palo Alto, California

INQUIRIES WELCOMED.
Send for new bulletin for complete details and prices.

WOLLENSAK
OPTICAL COMPANY • ROCHESTER 21, N.Y.

For more details circle NED-1075 K7 on enclosed inquiry slip

FOR SUSTAINED ACCURACY...



THE BALL BEARING SPINDLE

ON Logan LATHES

12" swing, 1" collet 1⅜" bore

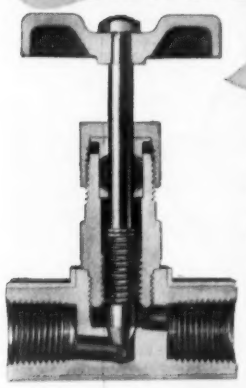
10" swing, ½" collet 25/32" bore

outperforms plain bearing and tapered roller bearing spindles because it requires *no bearing adjustment* for high or low speeds, heavy or light loads. This is another *sustained accuracy* feature that makes Logan Lathes more efficient and economical for high speed production and second operations. Screw cutting and turret models, 9", 10", 11", 12" and 14" swing. See your Logan Lathe Dealer, or write for the Logan Lathe and Shaper Catalog.

LOGAN ENGINEERING CO.
4901 W. Lawrence Ave., Chicago 30, Ill.

For more details circle NED-1076 K7 on enclosed inquiry slip

Now...the Marsh Needle Valve in 416 Stainless Steel throughout!



All the superior dependability of the Marsh Needle Valve . . . with all the corrosion resistance and durability of 416 Stainless Steel! Guaranteed for working pressure up to 10,000 psi; equally efficient at any lower pressure. Globe and angle patterns with double female connections in ⅛" to 1" size range. Also globe and angle valves with male inlet, female outlet, ¼" and ½" sizes.

MARSH INSTRUMENT CO.
Sales Affiliate of Jas. P. Marsh Corp.
Dept. 26, Skokie, Illinois

Marsh Needle Valves for Special Applications
For high pressure air service, Series R1900, hardened stem, *Marpak* packing system.
For oxygen and helium service, Series R1924, chemically pure, and with Marpak-Teflon packing system.
Write for detailed information

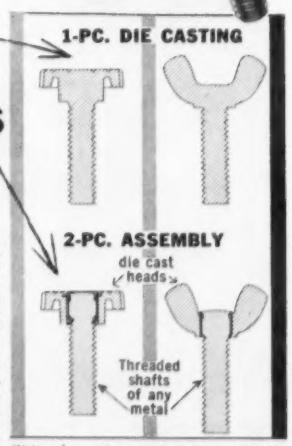
MARSH
"THE STANDARD OF ACCURACY"

Marsh Instrument & Valve Co. (Can.) Ltd., 8407 103rd St., Edmonton, Alta., Can.

For more details circle NED-1077 K7 on enclosed inquiry slip

GRC die cast WING & THUMB SCREWS

4 types to meet ALL needs



GRC offers you quality, quantity and economy PLUS your choice of two basic styles—one-piece zinc alloy die cast fasteners or assembled zinc alloy blanks with screw material of steel, brass, aluminum or other metals to order. Wing Screws have special patented recessed fingergrip, generous washer-type shoulder . . . Thumb Screws have exclusive wide top for firm, comfortable grip—plain or shoulder type. All have clean accurate threads . . . rust-proof, noncorrosive, bright finish. Select from huge catalog stock of threads, styles and lengths. Another example of GRC's wide variety of fasteners—wing nuts, cap nuts, thumb nuts, rivets, etc.—die cast in quantity for greater economy!

Write for prices and bulletin TODAY

World's Foremost Producer of Small Die Castings

GRIES

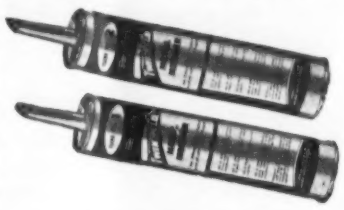
GRIES REPRODUCER CORP.
143 Beechwood Ave., New Rochelle, New York. NEw Rochelle 3-8400

For more details circle NED-1078 K7 on enclosed inquiry slip

New Processes & Materials

EPOXY METAL MENDER for repairing vehicle bodies

Unusually adhesive TwinWeld epoxy-type cold auto body solder for repair and build-up is offered in a self-measuring package. The metal mender provides extended working time of 4 hours at room temperature, yet can be hardened for finishing in 5 minutes under a heat lamp. It sticks firmly to metal, as well as cement and concrete, without "keying" and will not shrink or vibrate loose. Product can be stored for 2 years without danger of fire or explosion, and can be shipped by mail. The 1/5-gal Twin Pack sells for $7.50. Made by **Schramm Fiberglass Products, Inc.**, Fybrglas Industries Div., Dept. NE, 3010 W. Montrose Ave., Chicago 18, Ill.



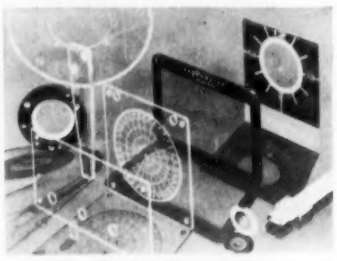
For more details circle NED-1079 K7 on enclosed inquiry slip

RUBBER COMPOUND withstands extreme heat and cold

Capable of withstanding subzero cold and temperatures higher than its own vulcanizing point, special rubber compound is unaffected by jet fuel, fungus and high humidity. Its first use is as a coating for a flexible nylon fabric diaphragm in a missile fuel system. Even at high temperatures generated by the missile in flight, the material remains flexible and does not stick to itself nor to the metal fuel tank on which it is mounted. Developed by **B. F. Goodrich Aviation Products Co.**, Akron, O.

For more details circle NED-1080 K7 on enclosed inquiry slip

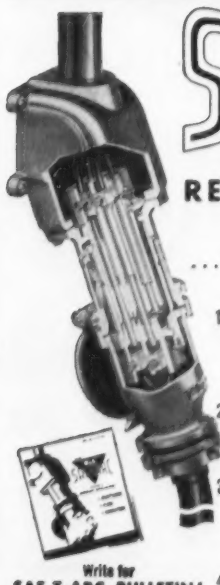
SCRATCH-RESISTANT PLASTIC unaffected by any known solvent



Having 30 times the resistance to abrasion of methacrylate and unaffected by any known solvent, improved CR-39 clear plastic will withstand constant temperatures up to 200° F. It can be sawed, drilled, bored, and machined easily, and does not crack, craze, or discolor on exposure to sunlight and weather. Having a persistent memory for its original shape, plastic also has high impact strength and is not brittle, even at low temperatures. CR-39 is supplied in sheets up to 48 x 60 in. and in thicknesses from 1/16 to 1 in. Made by **Homalite Corp.**, 14 Brookside Drive, Wilmington 4, Del.

For more details circle NED-1081 K7 on enclosed inquiry slip

ONE OF A SERIES FEATURING R & S SAF-T-ARC DESIGN ADVANTAGES



R&S SAF-T-ARC
CIRCUIT BREAKING RECEPTACLES • PLUGS CONNECTORS
. . . Assure Complete Safety EVEN UNDER OVERLOAD!

1. DEEP INSULATING CHAMBERS
. . . confine and snuff out harmful arcing and flashover by de-ionization and lack of oxygen . . . eliminating possible injury to personnel or plant equipment.
2. HIGH ARC RESISTANCE OF INSULATING BODIES
. . . do not track or burn even when subjected to 50% greater than rated loads.
3. TWO GROUNDING ARRANGEMENTS
—*Style No. 1* provides grounding through housings only.
—*Style No. 2* provides grounding through a separate pole AND housings.
4. NON-INTERCHANGEABLE POLARIZATION
. . . Plugs fit *only* into receptacles or connectors having the same electrical characteristics.

Write for SAF-T-ARC BULLETIN! Free 22-page book describes 12 ADVANCED DESIGN FEATURES

E-6 RUSSELL & STOLL COMPANY, INC. • 125 BARCLAY ST., N. Y. 7, N. Y.

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT — SINCE 1902

For more details circle NED-1082 K7 on enclosed inquiry slip

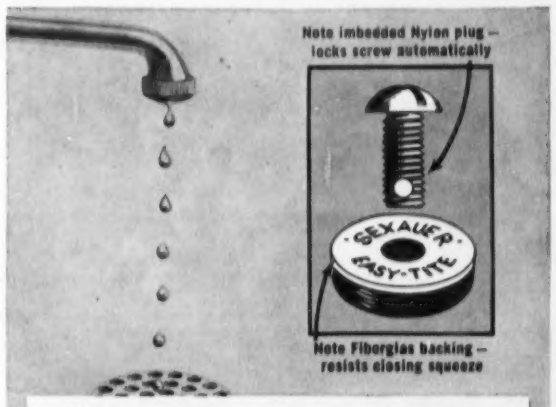
convert steel turnings into dollars

You store and haul only ⅓rd the volume of scrap after metal turnings are put through a Jeffrey crusher. You can salvage valuable cutting oils. You ship more tonnage per car and you get a better price for scrap, increasing the earnings of your salvage department. Bulletin 828 describes Jeffrey Metal Turnings Crushers.

JEFFREY

THE JEFFREY MANUFACTURING COMPANY • COLUMBUS 16, OHIO

For more details circle NED-1083 K7 on enclosed inquiry slip



Why Faucets Leak

---9 out of 10 washers are fastened with TOO LONG or SHORT
---screws. The screws QUICKLY LOOSEN, thus loose washers
---are destroyed thru grind and squeeze of opening and
---closing faucets.

34 years of research uncovers new solution

---Now, NEW (Patented) 'Sexauer' SELF-LOCK Monel screws,
---with an imbedded expanding NYLON PLUG, lock at the
---required depth AUTOMATICALLY—hold washers FIRMLY!

---Made of rustproof, non-corroding MONEL, heads don't
---twist off or screw slots distort. They are easy to remove
---when necessary, can be used over and over.

---Used with NEW 'Sexauer' EASY-TITE faucet washers, this
---combination outlasts past faucet repairs "6 to 1"! EASY-
---TITES are made of super-tough, pliable du Pont compound
---(neither rubber nor fiber) and reinforced, like a tire, with
---a vulcanized layer of Fiberglas, they resist distortion and
---splitting from shut-off grind and squeeze.

The hidden costs of faucet leaks!

Faucet leaks are costly! As authenticated by Hackensack, N. J. Water Co. and American Gas Association, STOPPING just ONE PIN-HOLE SIZE (1/32") LEAK can reduce water waste 8,000 gal. quarterly. If a HOT WATER FAUCET LEAK, water and fuel savings JUMP to over $7.58 QUARTERLY—plus additional savings on MATERIALS—LABOR—and *costly* FIXTURE REPLACEMENTS!

NEW SELF-LOCK screws and EASY-TITE faucet washers are just TWO of the "SEXAUER" line of over 3000 TRIPLE-WEAR plumbing repair parts and Pat'd. precision tools.

A "SEXAUER" Technician in your vicinity will make our NEW 126 page Catalog "H" available. He will gladly consult with you regarding a SURVEY of your plumbing fixtures to determine correct repair parts required and establish reasonable stock levels that avoid both overstocking and shortages—thus providing for efficient stock arrangement and control—all without obligation. WRITE TODAY!

J. A. Sexauer Mfg. Co., Inc. Dept. AU 107
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your NEW, 126 page catalog "H."*

My name ..... Title .....
Company or Institution .....
City ..... Zone ..... State .....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-1084 K7 on enclosed inquiry slip

you can DIAL your ADJUSTMENT on this AGASTAT® time/delay/relay

Frequent time adjustments are no problem with the dial head available on AGASTAT time/delay/relays. They provide a complete range of adjustment with 1 revolution of the dial. Dial markings permit easy calibration for accurate adjustment. And you can spot each of the 4 timing ranges quickly because they are color coded: blue from 30 seconds to 15 minutes; red from 10 seconds to 2 minutes; yellow from 0.1 to 10 seconds; white from 0.1 to 3 seconds.

Like all AGASTAT relays, units with dial heads are solenoid actuated, pneumatically timed. Each model is available with either dial head or needle valve adjustment. Where frequent readjustment of timing is necessary, dial head adjustment should be specified. For bulletin on all popular AGASTAT time delay relays, write to: Dept. A28-105

AGA DIVISION

Elastic Stop Nut Corporation of America

1027 Newark Avenue, Elizabeth, New Jersey

Pioneers in pneumatic timing

For more details circle NED-1085 K7 on enclosed inquiry slip

STRAP PACKAGES AUTOMATICALLY on the USS GERRARD Model 12

Up to 24 ties per minute on this automatic round strapping machine. Lowest-cost automatic on the market. Straps packages from 8" x 2" up to 26" x 20". Handles varied-size packages without adjusting. Uses USS GERRARD Round Strapping—14 ga. thru 18 ga. Tension can be pre-set. One-shot lubrication cuts maintenance costs. Model 12 needs only 11½ sq. ft. of floor space. Want to know more about this automatic strapping machine? Write to:

GERRARD STEEL STRAPPING DIVISION, UNITED STATES STEEL CORPORATION
4717 South Richmond Street, Chicago 32, Illinois

USS GERRARD

ROUND STEEL STRAPPING FLAT STEEL

UNITED STATES STEEL

For more details circle NED-1086 K7 on enclosed inquiry slip

Series H-Capacities from 2000 to 50,000 Pounds

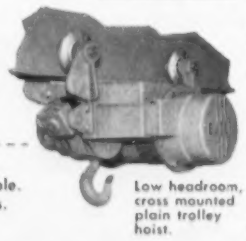
EUCLID HOISTS for Dependable Service

These hoists are highly efficient and strictly modern in every detail with oversize anti-friction bearings and heat treated steel parts in combination with a welded frame.

The planetary gearing and mechanical load brake are mounted in oil tight housings. The hoist gearing is assembled in the hoist drum.

This design produces an unusually compact, rugged and accessible hoist readily adapted to various installations and types of control.

Write for Literature



Low headroom, cross mounted plain trolley hoist.

Various other standard and special heavy duty hoists available. Write regarding your requirements.

THE EUCLID CRANE & HOIST COMPANY

1362 CHARDON ROAD • CLEVELAND 17, OHIO

For more details circle NED-1087 K7 on enclosed inquiry slip

New Literature & Catalogs

Free-Machining Steel

Horace T. Potts Co.—Guidance in the selection and properties of various types of Elastuf-Penn machinery steel is afforded in 8-page illustrated design bulletin. Applications, fabrication and mechanical properties are discussed, and comparative machinability test results are tabulated.

For more details circle NED-1088 K7 on enclosed inquiry slip

Armored Cable Fittings

O. Z. Electrical Mfg. Co.—36-page illustrated engineering bulletin 135A covers selection, application and performance of terminators, splicing fittings and accessories for interlocked armor cable. Included is latest price schedule.

For more details circle NED-1089 K7 on enclosed inquiry slip

Welding Up-To-Date

Easily understood language, many illustrations and a good index enhance the use of the fourth edition of the "Welding Handbook" as a textbook. One of its five sections is now published every year, making it more up-to-date than when previously published as a whole every 5 years. First section, "Fundamentals of Welding," contains basic material in 11 chapters and over 560 pages. Much information is in tubular form in the interpretive and factual book. Available for $9.00 per volume from American Welding Society, 33 W. 39th St., New York 18, N.Y.

For more details circle NED-1090 K7 on enclosed inquiry slip

Heat Treating Fabrications

Wiretex Mfg. Co.—Fabrications made of alloys that resist high temperatures and extreme corrosion conditions are described and illustrated in 16-page catalog M-7. Covered are heat treating fixtures, retorts, trays, boxes, plating baskets and tanks. Capacities range from jewelry parts to 5 tons.

For more details circle NED-1091 K7 on enclosed inquiry slip

Marking, Coding & Dating Equipment

Industrial Marking Equipment Co.—Technical data on Whippet marker, No. 7 Autoprinter, Rainbow coder and other standard motor and machine driven and hand-held marking, dating and coding machines are presented in illustrated catalog. Base-lock type and logotypes are covered.

For more details circle NED-1092 K7 on enclosed inquiry slip

Surface Roughness, Waviness & Lay

Brush Electronics Co.—Geometric irregularities of solid material surfaces and physical specimens for gaging roughness are defined in 24-page booklet on surface roughness, waviness and lay. The American Standard booklet, published by American Society of Mechanical Engineers, and available from this company, shows how to reduce machining costs and control surface finish. Classifications and measurement of surfaces are covered.

For more details circle NED-1093 K7 on enclosed inquiry slip

Helpful 56 page book FREE

if you use saws send for this book

This free book is based on facts and experience from many years' use of Foley precision saw filing equipment in thousands of plants. It contains pictures and helpful data showing how firms have actually increased sawing production 25% to 40%, lengthened saw life, reduced breakage, produced better work, and have lowered maintenance costs (one firm reports an annual saving of $350). Book includes instructions illustrating how automatic sharpening can benefit you. Request Manual No. 100—no obligation.

FOLEY MANUFACTURING CO. • 3323 N.E. 5th St., Minneapolis 18, Minn.

For more details circle NED-1094 K7 on enclosed inquiry slip

CORROSION-PROOF DURACOR HOODS AND FUME DUCTS

DURABLE glass fibre reinforced plastic in a complete range of shapes and sizes

Newly developed for handling fumes from highly corrosive chemicals in operations such as plating and pickling, DURACOR hoods and ducts provide permanent resistance to corrosion.

They are fabricated from specially compounded thermo-setting plastics which are combined with glass or other synthetic fibers. Hoods and ducts can be produced in almost any desired shape. They are light in weight, durable and strong (up to 30,000 psi flexural strength). Write today for complete information.

DURACOR CEILCOTE

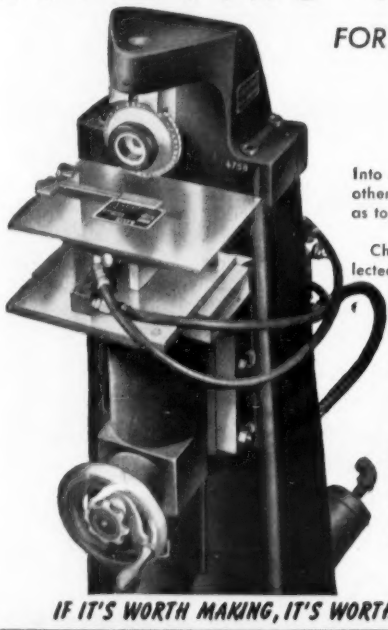
DURACOR is another development by CEILCOTE!

THE CEILCOTE COMPANY, INC.

7523-CC 4838 Ridge Rd. Cleveland 9, Ohio

For more details circle NED-1095 K7 on enclosed inquiry slip

PNEUMATIC POWER LETTERING PRESS



FOR STAMPING SELECTIVE LETTERING

Into DIE components and other metal parts such as tools, gauges and jigs.

Characters are selected by turning dial and are stamped into part when foot pedal is depressed. Spacing of characters is automatic.

Requires 20 to 40 pounds line pressure. Write today for further information on this or any other member of the famous GTS line.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

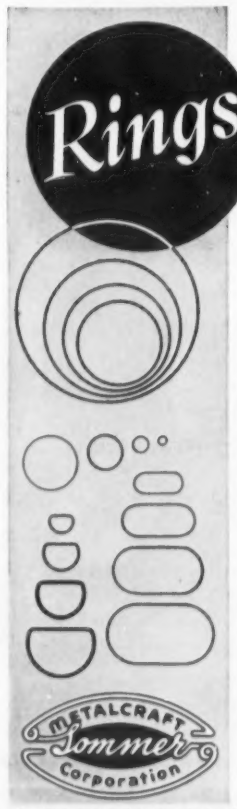
GEO. T. SCHMIDT, INC.

1800 W. Belle Plaine Avenue

Chicago 13, Illinois

For more details circle NED-1096 K7 on enclosed inquiry slip

Rings ... one of many wire products we make



Let Sommer solve your ROUND wire ring problems—including ring assemblies such as fan guards, grills, etc. Butt-welded and unwelded rings are our specialty.

Any gauge of wire up to ¼"—any sizes up to 24" in diameter, Sommer's modern, high-production equipment assures close-tolerance job specifications. Complete facilities for making "D" and oval rings as well.

Finishes include baked enamel, cadmium, brite zinc, brite nickel, nickel chrome, and mill finishes.

Let us work with you in designing and producing any wire shapes or forms you require. Send sample, blueprint or drawing—see how Sommer can save you time and money.

METALCRAFT Sommer Corporation

SOMMER

METALCRAFT CORPORATION

200 POSTON DRIVE

CRAWFORDSVILLE, INDIANA

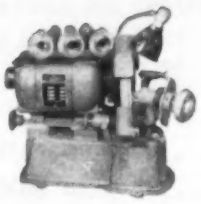
For more details circle NED-1097 K7 on enclosed inquiry slip

Now! Anyone can GRIND DRILLS

Quickly . . . . Accurately . . . . Easily

FOR DRILLS UP TO ¾"...

The BLACK DIAMOND Drill Grinder restores **an old** drill to like-new precision sharpness . . . *in 10 seconds!* Any inexperienced man (or woman!) is an expert grinder with this unit. Both lips ground at once . . . web-thinning equally simple! Pays for itself many times over!



FOR DRILLS UP TO 2½"...

The WORCESTER Drill Grinder (now manufactured by Black Diamond) sharpens 2, 3, or 4-lip drills, flat, flat twisted or chucking, up to 2½". Clearances are easily and instantly changeable, feeding is controlled by micrometer adjustment

FREE BULLETIN

Get all the facts! 4 page illustrated bulletin gives complete story. Write *Today!*

BLACK DIAMOND

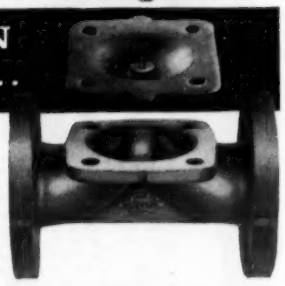
SAW & MACHINE WORKS 72 NORTH AVE. NATICK, MASS.

▲ For more details circle **NED-1098 K7** on enclosed inquiry slip ▲

Outperforms other valves under SEVERE chemical conditions

GRINNELL-SAUNDERS DIAPHRAGM VALVES

with TEFLON Diaphragms...



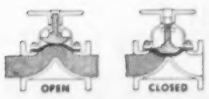
Grinnell Teflon Diaphragms are made by a special process which produces a better product of greater density, toughness and flex life.

The case histories cited below demonstrate that Teflon offers a very high degree of chemical inertness to some of the most difficult chemicals which industry today must handle. Yet these are only a few of many success stories in the Grinnell files.

Diaphragm life depends on temperature, pressure and frequency of operation. Inquiries must include complete service data to receive prompt attention.

Service Conditions	Saunders Valve Now Used	Service Life: Teflon Diaphragm	Service Life: Previous Valve
Case 1. Benzene hexachloride (30%-40% benzene, free chlorine); 120 to 130 F, 10 to 20 psi; operated 3 to 4 times daily	Glass lined bodies; Teflon Diaphragm; 1 to 3 inches	10 to 14 months	1 to 2 months
Case 2. 90%-95% HNO_3 plus 1.8% HF (specific gravity 1.62-1.77) 115 F in summer; 40 F in winter; 125 psi; operated 2 to 3 times daily	Durimet 20 body; Teflon Diaphragm; 1 to 3 inches	8 months	2 months
Case 3. Sulphuric acid 85%; outside temperature; no pressure; operated 4 times daily	Iron Bodies; Teflon Diaphragms; 2½ inches	Still in service after 1 year	3 weeks

Features of Grinnell-Saunders Diaphragm Valves:



- Diaphragm lifts high for streamline flow in either direction . . . absolutely isolates working parts from fluid.
- Resilient diaphragm assures positive closure.
- Body, lining and other diaphragm materials to suit service conditions.
- Simple maintenance. Diaphragm can be replaced easily without removing valve.

GRINNELL

WHENEVER PIPING IS INVOLVED

Grinnell Company, Inc. Executive Offices: Providence, R. I.
Sales Offices and Warehouses in Principal Cities

▲ For more details circle **NED-1099 K7** on enclosed inquiry slip ▲

New Processes & Materials

BOILER COMPOUNDS for cleaning and sealing

Clogged and leaky boilers can be reconditioned by use of two compounds, offered in liquid and powder forms. Heat-Pep cleaner loosens core sand, oil, and other dirt common to new boilers. It also removes accumulated rust and impurities from old boilers, and coats boiler walls to protect them from rust and corrosion. This compound vaporizes and circulates through the entire system. Heat-Pep sealing compound mixes with boiler water, quickly working its way into any leak. Boiler pressure causes it to form a permanent bond that is unaffected by expansion and contraction. Made by **J. A. Sexauer Mfg. Co.**, Dept. 39, 2503 Third Ave., New York 51, N. Y.

▲ For more details circle **NED-1100 K7** on enclosed inquiry slip ▲

DETERGENT multipurpose, concentrated type

Safe to use on all common surfaces, including aluminum, durable paint, tile, floors, vehicles, and machinery, Kelite A-P-C detergent has high sudsing and suds-staying power, and will not harm the hands. It maintains a maximum pH of 10.6 and is furnished in a concentrated, powdered form. Used ½ to 4 oz per gallon of water at 70 to 140° F, product is soluble in hot, cold, hard, soft, or saline water. Made by **Kelite Corp.**, 81 Industrial Rd., Berkeley Heights, N. J.

▲ For more details circle **NED-1101 K7** on enclosed inquiry slip ▲

MORTAR BONDING AGENT is also an ad-mix for grout

Covering oil-painted walls with metal, plastic, or ceramic tile is made economically feasible with Tile-Weld bonding agent which bonds mortar bed for tile to any clean, structurally sound surface. When used as an ad-mix to white portland cement grout, Tile-Weld minimizes shrinking and cracking, and produces a harder, dustless finish. Diluted with an equal part of water, product becomes a primer-sealer which prevents absorption of tile mastic into porous surfaces. It is safe to use and contains nothing that will discolor a pure white grout. Developed by **Larsen Products Corp.**, Dept. ND, 4933 Elm St., Bethesda 14, Md.

▲ For more details circle **NED-1102 K7** on enclosed inquiry slip ▲

PORTABLE-HEAVY DUTY Lesto ELECTRIC HAND SAW

- SAWS LIKE A DREAM
- PRECISE AS A SWISS WATCH
- FINEST BALANCE
- LEAST VIBRATION

8 BALL AND ROLLER BEARINGS for all moving parts

Turn it on, guide it . . . a Lesto saw will do the rest. Operating at a rate of 2300 strokes a minute, LESTO cuts finer than sandpaper-smooth, reaches hard-to-get-at-places.

VERSATILE! RUGGED! POWERFUL!

The LESTO Saw has many talents. With its 20 different blades, it cuts hardwood, softwood, plywood, formica, pressboard, plastic, metal, abrasives. It's a rip, cross-cut, coping, keyhole, band, scroll and jig saw—7 saws in 1!

LESTO has a PLANETARY GEAR—the best known mechanism to convert the rotary motion of the motor to the reciprocating motion of the blade.

Service and Parts Available Nationally—SAWS • DRILLS • SHEARS • NIBBLERS

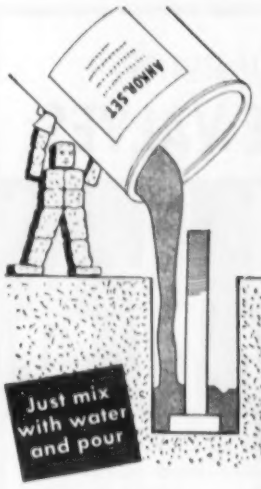
See Your Industrial Distributor or Write:

VICTOR J. KRIEG, Inc.

PRECISION MADE POWER TOOLS FOR UNSURPASSED PERFORMANCE

611 BROADWAY, NEW YORK 12, NEW YORK

▲ For more details circle **NED-1103 K7** on enclosed inquiry slip ▲



ANCHOR Machines, Motors, Rails, Partitions, Flanges, Seats, etc. IN CONCRETE PERMANENTLY

USE ROCK-TRED **ANKOR SET**

Just mix with water and pour

- Easy To Apply
- Sets in ½ Hour
- Non-Shrinking
- Self-Bonding
- Contains No Pitch, Asphalt or Resin

Also for fast-patching cracks and holes in concrete

Comes packaged ready to use. Simply add water and apply. Quickly forms an extremely hard durable bond that becomes an integral part of the floor. Blends with surrounding concrete. Send for details.

ROCK-TRED Corporation

Manufacturers of a Complete Line of Building Maintenance Materials

7440-7450 North St. Louis Avenue • Skokie, Illinois

▲ For more details circle **NED-1104 K7** on enclosed inquiry slip ▲

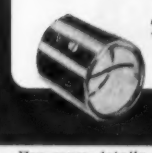
NOW! *Adjustable Diameter and Open*

THOMSON BALL BUSHINGS

The BALL Bearing for *all* your **LINEAR MOTIONS**

LOW FRICTION · ZERO SHAKE OR PLAY
ELIMINATE BINDING AND CHATTER
SOLVE SLIDING LUBRICATION PROBLEMS
LONG LIFE · LASTING ALIGNMENT

The various types cover a shaft diameter range of ¼" to 4". Small sizes available in Stainless Steel. Write for literature and name of our representative in your city.



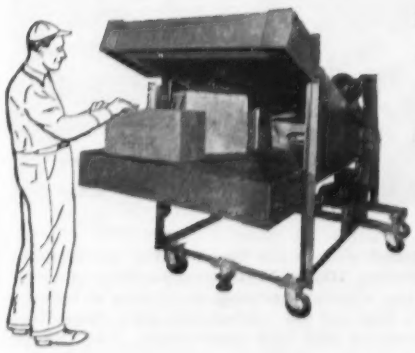
THOMSON INDUSTRIES, Inc.

Dept. C, MANHASSET, NEW YORK

Also manufacturers of NYLINED Bearings . . . Sleeve Bearings of DuPont NYLON

▲ For more details circle **NED-1105 K7** on enclosed inquiry slip ▲

The "MAW" that Collapses and Shreds anything that belongs in a paper bale!



Specifications:

Floor space required: 68"x97"
Net weight 4,700 lbs.
Shipping weight 5,000 lbs.
Knives powered by heavy-duty, 15 h.p., 3 phase, 60 cycle motor—220 or 440 volts.
Individual motors for crusher belts.
Reversing switch on belts and knives.
For continuous operation as fast as one man can feed.

Costly labor to prepare boxes for shredding is unnecessary with the Silver "40 A". Cartons and paper boxes are both crushed and shredded for simplified baling.

Shredded material can be fed directly into baler or carried away by pneumatic or conveyor system.

Send for complete information about the Silver "40 A" (one of 11 models) today.

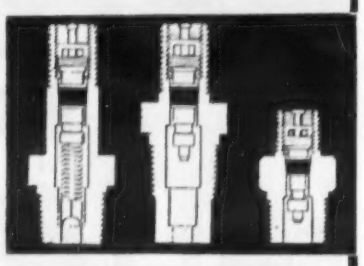
Industrial Shredder and Cutter Company

700 S. ELLSWORTH AVE. • SALEM, OHIO, U. S. A.

▲ For more details circle **NED-1106 K7** on enclosed inquiry slip ▲

See these Multi-purpose

MINIATURE VALVES



— designed and manufactured from 7/16-in. hexagon brass and have 1-8 in.-27 dry seal pipe threads. . . . . .

These have the same internal function as tire valves. They accommodate long and short valve cores and valve caps in water pumps, vacuum and pressurized containers, fire extinguishers and inflatable air products. Cores impervious to Freon and propane gases, acids, lubricants, greases, and certain liquids are available. Write for detailed information.

A. G. KADDIS SCREW PRODUCTS, INC.
314 Hudson Ave.
Rochester 5, N. Y.

A KADDIS SYN-CRO-MATIC PRODUCT

For more details circle NED-1107 K7 on enclosed inquiry slip

TOOLS
JIGS
DIES
MACHINES

RUST-PROOFED IN SECONDS!

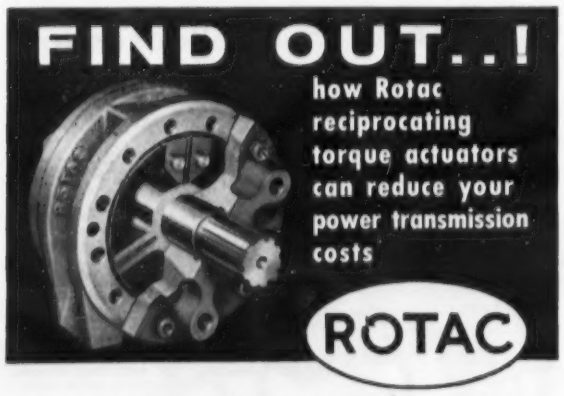
Immediate mail-order delivery of this clear, dry waxy film that positively seals moisture out. Clean, handy and effective as only Houghton can make it.

Price $15.24 per case (1 doz. 12 oz. cans) f.o.b. Philadelphia, Pa. Clip this advertisement to your letter or purchase order and mail to E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33.

RUST-VETO SPRAY
. . . a product of
E. F. HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO
Ready to give you on-the-job service . . .

For more details circle NED-1108 K7 on enclosed inquiry slip

FIND OUT..!



If you are concerned with power transmission applications —clamping, indexing, lifting, revolving, pushing, pulling, lowering, swinging, closing, opening, oscillating or turning —you'll want to find out the cost-saving advantages improved Rōtac actuators offer such applications. Rōtac offers the most complete line available.

FREE LITERATURE

Send today for detailed literature about Rōtac, a division of Ex-Cell-O Corporation. Find out how rotary power is being used throughout industry in thousands of applications. Send for your free literature; complete with photos, schematics, engineering data, etc.

57-61

EX-CELL-O CORPORATION
GREENVILLE PLANT
945 E. SATER ST.
GREENVILLE, OHIO

For more details circle NED-1109 K7 on enclosed inquiry slip

New Literature & Catalogs

Heat-Resistant Titanium Alloys

Kennametal Inc.—The many applications of Kentanium heat-resistant titanium carbide alloys are pointed up in 12-page bulletin B-444. Simple and complex shapes that have been used successfully at above 1800° F are shown. Physical properties of 13 different compositions and corrosion resistances are tabulated and charted to show effects of temperature and time of exposure.

For more details circle NED-1110 K7 on enclosed inquiry slip

Jet Age Lubricants

Lehigh Chemical Co.—24-page brochure "Jet Age Lubricants" is a manual on development, testing, and application of lubricants engineered for jet age requirements. Lab testing operations are detailed. In section devoted to military specifications and their significance, a complete listing is given of all applicable lubricants. Industrial oils, greases, damping fluids, and preservatives are listed.

For more details circle NED-1111 K7 on enclosed inquiry slip

Automatic Pressure Regulators

Crane Co.—Features of improved No. 960 bronze pressure regulators for pressure control of air or steam at up to 250 psi and 450° F are highlighted in 6-page folder AD-2268. Two pages of tables aid selection of proper size regulator. Tips for making better installations are included.

For more details circle NED-1112 K7 on enclosed inquiry slip

Steel Hubs & Split Taper Bushings

Browning Mfg. Co.—Stock sizes of steel hubs and malleable split taper compression bushings specified in 4-page form provide simple and economical means for mounting propeller fans, impellers, gears, plate sprockets, conveyor pulleys, live rollers, gravity conveyor rolls, washer drums, dryer barrels, sheaves, couplings, clutches, and other items.

For more details circle NED-1113 K7 on enclosed inquiry slip

Brass Hose Fittings

Hose Accessories Co., Le-Hi Div.—Brass hose fittings for low and medium pressure service in conveying air, spray, steam, suction, water, as well as for welding use are cataloged in 8-page bulletin 140. Covered are hose nipples, couplings, bushings and nipples, hose pipes, coupling adapters, hose menders, ferrules, and hydrant reducers.

For more details circle NED-1114 K7 on enclosed inquiry slip

Brush & Branch Chippers

Mitts & Merrill—Six new models of self-powered brush chippers described in 6-page bulletin 657 will handle all kinds of brush and branches up to 6-in. diameter. Branches are quickly reduced to large or small chips, and are discharged into truck. Units embody the staggered 12-knife chipping cylinder.

For more details circle NED-1115 K7 on enclosed inquiry slip

Standard Saturable Reactors

Magnetics, Inc., Control Div.—32-page catalog R-10 describes standard lines of saturable reactors for industrial and other control functions. These high gain units are made in complete lines for both 240 and 120-v operation. Typical application circuits are shown, and typical reactor curves are graphed. Power outputs range from 50 to 2000 w.

For more details circle NED-1116 K7 on enclosed inquiry slip

Drill Jig Bushings

American Drill Bushing Co.—Printed on heavy plastic-coated stock that resists water, oil and grease smudges, pages of this drill jig bushing catalog give bushing types and sizes, drill sizes with their decimal equivalents, and bushing concentricity and Rockwell hardness figures. Supplementary pages cover bushings with unground outside diameters, and those for imbedment in castable and soft materials.

For more details circle NED-1117 K7 on enclosed inquiry slip

Cranes & Monorail Systems

Jervis B. Webb Co., Spanmaster Crane Div.—Specifications and general information on Spanmaster cranes and monorail systems are contained in illustrated catalog.

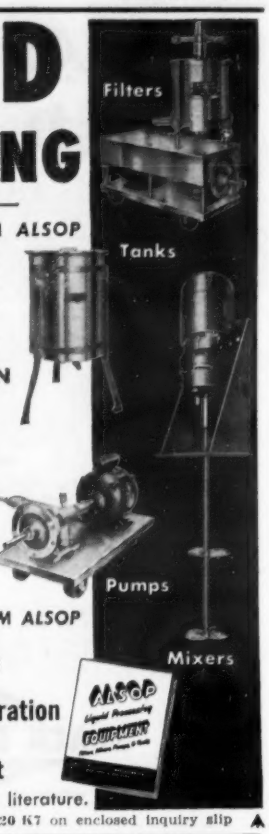
For more details circle NED-1118 K7 on enclosed inquiry slip

Aviation Products Facilities

Kelsey-Hayes Co., Aviation Div.—Typical products produced by this division for the aviation field, as well as facilities which are available for custom-manufacture of aircraft components and subassemblies, are described in 32-page illustrated brochure.

For more details circle NED-1119 K7 on enclosed inquiry slip

LIQUID PROCESSING



DEPEND ON ADVICE FROM ALSOP

Engineering and Laboratory assistance, at no charge, to solve your equipment problems in...

. . . LIQUID FILTRATION
. . . LIQUID MIXING
. . . LIQUID STORAGE
. . . LIQUID PUMPING

Remember, a complete report on your liquid processing problems is FREE!

DEPEND ON EQUIPMENT FROM ALSOP

ALSOP Engineering Corporation
1210 East Road
Milldale, Connecticut

Send for analysis forms and literature.

For more details circle NED-1120 K7 on enclosed inquiry slip

IT CAN SAVE YOU $$$$$$$

— by Slashing Metal-Cutting Costs! . . . .

BUT IT'S *FREE!*

Better Write for the

HKP PORTER CUTTER-*Catalog*

In manufacturing plants everywhere these powerful, efficient cutters are saving money in production, maintenance and materials handling operations. Manufacturers are finding out that a PORTER METAL CUTTER is capable of exerting 20,000 pounds of cutting pressure — sufficient to cut ⅝" diameter steel rod, at a labor cost of 1/14th of a cent, versus 7 cents cost with other tools. Your jobs may be tough, but, perhaps the PORTER CUTTER catalog can come up with a tool that's tougher — and the answer to your problem. At any rate, it will cost you nothing to

WRITE FOR THE PORTER CATALOG — TODAY!

It shows 108 different metal cutters — that cover just about every cutting job we know of, including BOLTS, RODS, SCREWS, RIVETS, SOFT, MEDIUM AND HARD METALS, WIRE, STEEL STRAPPING, CABLE, CHAIN and other metals.

Ask your Industrial Distributor or write

H. K. PORTER, Inc. Somerville 43, Mass.

For more details circle NED-1121 K7 on enclosed inquiry slip

Write for *Wheeler* New Product Data Sheet No. 100 D

Wheeler ULTRA-NEW
POWER-LUME

Delivers TWICE the amount of lumen output per foot of lamp length!

Two outstanding Wheeler units — Power-Lume F and Power-Lume V — specifically designed to utilize *fully* the extra illuminating power of the new Power Groove Lamp. Both fixtures are designed for all medium to high mounting applications . . provide more comfortable seeing, cooler lamp operation, thanks to Wheeler's unique diffuser apertures that direct MORE than 20% of the light upwards.

WHEELER REFLECTOR CO.
(Division of Franklin Research Corp.)
275 Congress St., Boston, Mass.
Distributed exclusively through electrical wholesalers.

For more details circle NED-1122 K7 on enclosed inquiry slip

Spring load and elongation checking ...simplified with a Dillon Dynamometer

Here's further proof of the accuracy, versatility and economy of Dillon Dynamometers. In this inexpensive set-up, springs measuring up to 15 ft. in length, with tensions up to 700 lbs., are precisely checked for spring load and elongation properties to insure operating smoothness.

One end of spring is attached to secured Dillon Dynamometer. Load is applied to opposite end of spring. Test table is calibrated to note elongation at any given load.

There are more than 100 other ways in which Dillon Dynamometers can solve *your* problems. 13 capacities for tensile, torque or compression. Available from 0-500 lbs. to 0-100,000 lbs. Light and rugged. Certified accurate. Write for free illustrated brochure.

W. C. Dillon & COMPANY, INC.

14578NE Keswick St., Van Nuys 1, Calif.
'suburb of Los Angeles"

For more details circle NED-1123 K7 on enclosed inquiry slip

NEW!

Wells Roto-Veyor
AUTOMATIC BAR FEED

The Wells Roto-Veyor is an entirely new concept in automatic bar feeds. Designed specifically for use with the Wells Model 1200 Band Saw, the Roto-Veyor converts it into a heavy duty completely automatic cut-off machine.

All conveyor feed rollers are mechanically powered —electrically controlled. The Roto-Veyor is capable of unlimited projection length. Feed mechanism and stock clamping action is synchronized with the saw to provide accurate repetitive cutting.

The Roto-Veyor will improve the saw's efficiency, save time, and reduce production cutting costs. *Write today for complete information.*

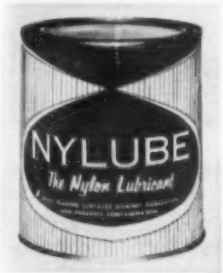
Wells

The Pioneers of Horizontal
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 Harding St. Three Rivers, Mich.

For more details circle NED-1124 K7 on enclosed inquiry slip

New Processes & Materials

NYLON LUBRICANT
does not become greasy or runny



Multiple lubricizing additives and corrosion inhibitors contained in Nylube lubricant for nylon bearing surfaces assure a dry seal against oxidization and contamination. Nylube is a dry-base lubricant that becomes wet and slippery as pressure is applied, then resolidifies instantly as pressure is relieved. Thus, it lubricates without becoming greasy, runny, or messy. Parts are dipped or sprayed with a very light film of lubricant every six months on the average to keep them sealed and running quietly. Test samples are offered by **Synco Co.,** Dept. N, United Artists Bldg., Detroit 16, Mich.

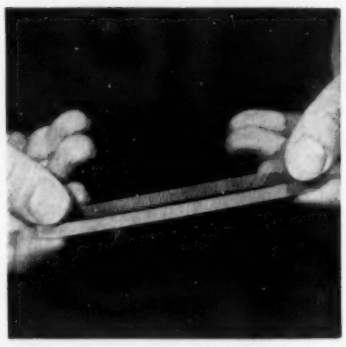
For more details circle NED-1126 K7 on enclosed inquiry slip

PHOTOCOPY PAPER
easily handled under bright light

Perfect photocopy reproductions can be made with CpM photocopy paper even under the most severe office lighting conditions. Paper reportedly has low sensitivity to white light and allows a wide variety of copying work at a single exposure dial setting. It assures clarity and definition to all work, including uniform images at top and bottom of copy. Tests show paper can be peeled in 5 seconds after developing. Developed by Agfa, paper is offered by **Copease Corp.,** 425 Park Ave., New York 22, N. Y.

For more details circle NED-1127 K7 on enclosed inquiry slip

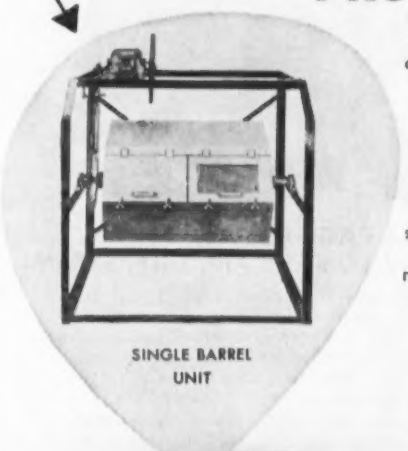
FLEXIBLE GEAR BELT
for use on small diameter pulleys



Positive traction over small diameter pulleys is assured with this flexible gear - tooth transmission belt. Molded teeth mesh with corresponding teeth on the pulleys to assure a constant relationship between two or more shafts. Belt with 40-diametral pitch teeth has a shear strength exceeding 50 lb per in. of width. Belts are currently available with 40 and 120-diametral pitch teeth for test and experimental purposes. They can be produced in almost any size or small tooth pitch requirement. Made by **Russell Mfg. Co.,** 378 E. Main St., Middletown, Conn.

For more details circle NED-1128 K7 on enclosed inquiry slip

Kramer SOLVES YOUR TUMBLING PROBLEMS



Size 30" x 36" or engineered to your specifications. Barrels lined with kiln-dried-and-glued-maple. Child's play to operate — Economical on space — motors are individually mounted overhead-double-decked or single. Tumbling supplies also available.

Write Dept. MP for information

H. W. KRAMER CO.
120-30 JAMAICA AVENUE • RICHMOND HILL 18, N. Y.

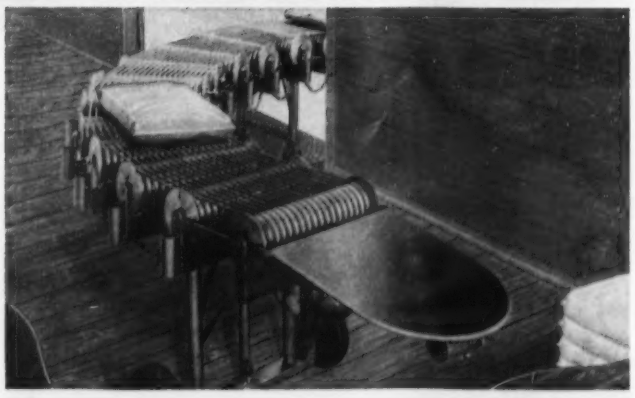
For more details circle NED-1129 K7 on enclosed inquiry slip

USE a POWER-CURVE Self-Propelled Flexible LOADER

CONVEYS AROUND CORNERS... ELIMINATES HAND TRUCKING

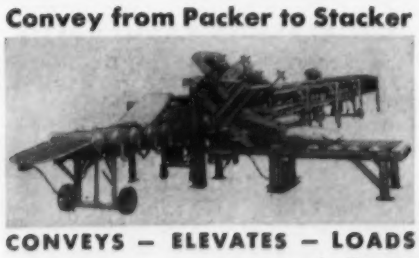
Endorsed by major bagged product industries to:

- Deliver bags into end of box-car or truck
- Reduce loading crew to one operator-stacker
- Cut costs 60%
- Eliminate empty hand-truck return trips
- Maintain steady loading rate



Travels with push-button controls • Reversible — loads or unloads • All changes in positions made without stopping powered conveying surface • Adjusts to all stacking heights

Convey from Packer to Stacker



CONVEYS — ELEVATES — LOADS

Complete Systems...
Let Power-Curve specialists design a Bag Handling System for you— No Obligation

Write:
POWER-CURVE CONVEYOR CO.
2185 S. JASON STREET • DENVER 23, COLO.

For more details circle NED-1125 K7 on enclosed inquiry slip

Many* BRUNT FAULTFINDERS *Protect* FORD PLANTS *against accidental grounds

Following a serious ground at one of its largest assembly plants, Ford placed an emergency order for a Brunt Faultfinder, which pin-pointed the trouble immediately.

Since that initial purchase, Ford Motor Company, noted for shrewd buying of equipment, has ordered twenty-two Brunt Faultfinders. These protect Ford Assembly Plants against production delays due to accidental grounds in normally ungrounded power circuits. And Ford is just one of many large companies using more than one Brunt Faultfinder.

One hour of production shutdown in an average plant can cost more than the Brunt Faultfinder that could have prevented it. This fast-working instrument locates grounds in circuits up to 600 volts a.c. or d.c. in minutes. No pulling of switches . . . no interference with production . . . can be used in dark or noisy locations . . . no delicate meters to adjust . . . traces pole line signals without climbing . . . easy one-man operation. Signal current of only 2 amperes will not damage control wiring.

Order this useful instrument today or send for new descriptive booklet.

PARR MANUFACTURING CORP.
44 Austin Street Newark 2, N. J.

For more details circle NED-1130 K7 on enclosed inquiry slip

16-PAGE BULLETIN SHOWS HOW TO SAVE AIR, GAS, STEAM!

New, colored, well-illustrated bulletin describes the completely self-contained, self-operated Builders Shuntflo Meter. These direct-reading, easy-to-install meters (for 1" to 24" lines) are installed directly in your pipeline to accurately totalize air, gas, or steam usage.

Send for Shuntflo Bulletin today! **Builders-Providence, Inc., 425 Harris Ave., Providence 1, R. I.**

BUILDERS-PROVIDENCE
DIVISION OF
B-I-F INDUSTRIES

For more details circle NED-1134 K7 on enclosed inquiry slip

WORCESTER'S
Econ-O-"Miser" VALVE*
Pat. Pending

is BOTH a Ball Valve and Union

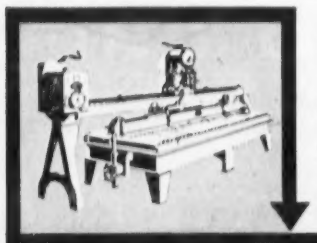
Designed for: ECONOMICAL INSTALLATION . . . LONGER OPERATING LIFE . . . LOW COST MAINTENANCE

. . . meaning greater savings whether the application is Original Equipment Manufacture, in-plant maintenance or process lines.

For more information on this and Worcester's outstanding line of BALL, GATE, or NEEDLE VALVES contact:

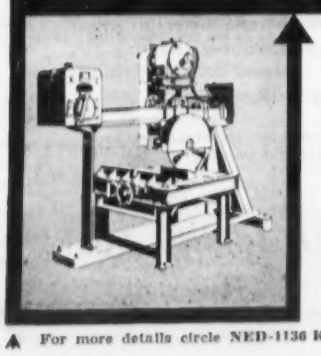
WORCESTER VALVE CO., Inc.
17 Parker Street, Worcester, Mass., Phone PLeasant 7-8368

For more details circle NED-1135 K7 on enclosed inquiry slip



Clean, accurate high-speed cuts on ANY METAL, PLASTIC, or WOOD. Cut-offs for 10" to 48" cuts . . . long-cut saws for 4' to 60' cuts.

Cuts Metal FAST!



Choose from dozens of models . . . 3 to 125 HP . . . 6" to 87" blade capacity. Cross movement available.

WRITE TODAY FOR
Free Brochure
TY-SA-MAN Machine Co.
550 White Ave.
Knoxville, Tenn.

For more details circle NED-1136 K7 on enclosed inquiry slip

New Literature & Catalogs

"Dream Office" Furniture

Sperry Rand Corp., Remington Rand Div.—How dramatic color tone has taken a leading role in all office scenes is shown pictorially in 26-page "Dream Office Furniture" catalog. Utility, strength, and beauty are combined in this line of office furniture.

For more details circle NED-1137 K7 on enclosed inquiry slip

Broaches

duMont Corp.—Listed in 16-page catalog are 34 additions to the Minute Man line of standard stock broaches. Additions include nine sizes of square and hexagon tools, three sizes of production keyway broaches, and a complete new line of stock round broaches, all standardized. Also described are keyway broach kits, special broaches, arbor presses, and magnetic bases for dial indicators.

For more details circle NED-1138 K7 on enclosed inquiry slip

Jet Exhausters & Compressors

Schutte & Koerting Co.—Single and multiple nozzle water jet exhausters, laboratory vacuum pumps, and barometric hydro-vac exhausters for pump priming, handling air, evacuating vessels, and mixing gases and liquids in continuous processes are described in 16-page bulletin 4P. Complete data are given on design and performance.

For more details circle NED-1139 K7 on enclosed inquiry slip

Self-Coiling Electric Cords

Essex Wire Corp., Cords Limited Div.—Characteristics and uses of communication and power Coiled Cords available for all types of equipment are subject of 16-page catalog. Discussed are applications and inherent features, wire types and constructions, terminations that can be used, and available types. These self-retracting cords can be fitted with a wide range of terminations, plugs, and connectors.

For more details circle NED-1140 K7 on enclosed inquiry slip

Marking Machines in Use

Geo. T. Schmidt, Inc.—72-page spiral-bound catalog 14 shows how manufacturers in many fields have solved their marking problems. Case studies outline installation, production problems, and cost-saving solutions. Reference material offers answers to industrial and other marking questions.

For more details circle NED-1141 K7 on enclosed inquiry slip

Stainless Steel

Washington Steel Corp.—Physical properties and analysis, corrosion resistance, surface characteristics, fabrication, application, maintenance and bacteria cleanability, military specifications, and availability of MicroRold 430 stainless steel sheet and strip are detailed in 28-page handbook. Various uses of the nickel-free straight chromium stainless grade are shown.

For more details circle NED-1142 K7 on enclosed inquiry slip

New HYDRA-LOCK EXPANDING ARBOR

The ONLY Arbor Expanded with HYDRAULIC PRESSURE

"ARBOR ON ARBOR"

The HYDRA-LOCK principal has many other uses other than arbors and chucks.

Fixtures • Gages • Special holding and locating devices

HYDRA-LOCK is a patented, hydraulically expanded, precision tool, for internal or external chucking of parts or tools, for all types of machining, grinding and inspection operations. HYDRA-LOCK Arbors are expanded by a self-contained hydraulic system, which assures you of the only true, equalized, accurate centering force.

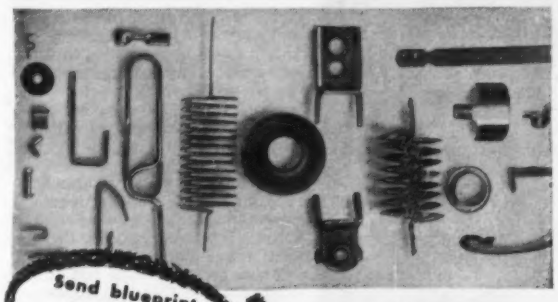
The base arbor completely fills the I.D. opening. Because there is no line contact, there is no wobble of the part during machining. This results in better finish, squareness of faces, and guaranteed concentricity.

The "Arbor on Arbor" consists of a base expanding arbor, on which you can use sleeves or wheels of any size. You get the same expansion on the O. D. of the wheel as on the base arbor. In many instances, only one base arbor is required to do a variety of holding applications.

Some territories available for Dealers or Distributors.

A & C ENGINEERING COMPANY
12024 E. NINE MILE ROAD • WARREN, MICHIGAN

For more details circle NED-1143 K7 on enclosed inquiry slip



Send blueprint or samples for estimate

WIRE FORMS
and METAL STAMPINGS

We'll prove that our high speed production means lower unit costs for you!

You'll save two ways — (1) the initial low unit cost made possible by high speed machines; (2) precision and quality control guarantees accurate parts and performance.

STRAIGHTENING AND CUTTING
Perfect straight lengths to 12 feet. .0015 to .125 diameter.
WIRE FORMS .0015 to .125 diameter.
SMALL METAL STAMPINGS .0025 to .035 thickness. .062 to 3 inches wide.

Specializing in production of parts for electronic, cathode ray tubes and transistors.

Write for illustrated folder.

ART WIRE AND STAMPING COMPANY
15 Boyden Place • Newark 2, New Jersey

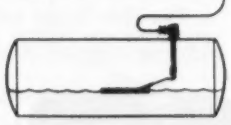
For more details circle NED-1144 K7 on enclosed inquiry slip

100% AUTOMATIC TANK GAUGING

Dependable remote reading tank contents gauges using a closed hydraulic transmission system. No power required.

Several sizes available. Approved by Underwriters Laboratories and Factory Mutual. UL approved switches.

Write for complete details, to Dept. H



Since 1920 of proven quality

THE LIQUIDOMETER CORP.
LONG ISLAND CITY 1, NEW YORK

For more details circle NED-1145 K7 on enclosed inquiry slip

MERCOID® PRESSURE CONTROLS FOR OUTDOOR SERVICE

Weather Proof
Drip Tight
Semi-dust Tight
Sleet Proof
Splash Proof
Moisture Resistant
Rain Tight
Water Tight

Equipped with Sealed Mercury Contacts
External Adjustments
Visible Calibrated Dial

AVAILABLE IN 17 PRESSURE RANGES FROM
0-30" VAC. TO 300-2500 PSI.
WITH THE SENSITIVITY YOUR APPLICATION REQUIRES

Mercoid weather resistant controls are also available for temperature and liquid level applications.

Write for Bulletin 14PW

THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILLINOIS, U.S.A.

For more details circle NED-1146 K7 on enclosed inquiry slip

USE THIS SELF-MAILER FOR MORE INFORMATION

FOLD—SEAL—MAIL

SECOND FOLD TO THIS LINE

Circle the Numbers Below corresponding to items on which you want additional information. Your request will be sent promptly to the manufacturer. Please fill in the coupon completely. We'll pay the postage.

	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051	1101	1151	1201
2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205
6	56	106	156	206	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206
7	57	107	157	207	257	307	357	407	457	507	557	607	657	707	757	807	857	907	957	1007	1057	1107	1157	1207
8	58	108	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208
9	59	109	159	209	259	309	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209
10	60	110	160	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210
11	61	111	161	211	261	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211
12	62	112	162	212	262	312	362	412	462	512	562	612	662	712	762	812	862	912	962	1012	1062	1112	1162	1212
13	63	113	163	213	263	313	363	413	463	513	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163	1213
14	64	114	164	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214
15	65	115	165	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215
16	66	116	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216
17	67	117	167	217	267	317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217
18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219

FOLD BOTTOM EDGE TO THIS LINE

20	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971	1021	1071	1121	1171	1221
22	72	122	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	972	1022	1072	1122	1172	1222
23	73	123	173	223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123	1173	1223
24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974	1024	1074	1124	1174	1224
25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225
26	76	126	176	226	276	326	376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126	1176	1226
27	77	127	177	227	277	327	377	427	477	527	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227
28	78	128	178	228	278	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228
29	79	129	179	229	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229
30	80	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
31	81	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931	981	1031	1081	1131	1181	1231
32	82	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232
33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
34	84	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234
35	85	135	185	235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235
36	86	136	186	236	286	336	386	436	486	536	586	636	686	736	786	836	886	936	986	1036	1086	1136	1186	1236
37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987	1037	1087	1137	1187	1237
38	88	138	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
39	89	139	189	239	289	339	389	439	489	539	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189	1239
40	90	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240
41	91	141	191	241	291	341	391	441	491	541	591	641	691	741	791	841	891	941	991	1041	1091	1141	1191	1241
42	92	142	192	242	292	342	392	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192	1242
43	93	143	193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243
44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244
45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196	1246
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997	1047	1097	1147	1197	1247
48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248
49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199	1249

PLEASE FILL IN COMPLETELY

PRINT OR TYPEWRITE

NEW EQUIPMENT DIGEST

A PENTON PUBLICATION

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Principal Products Manufactured: _____

Approximate Number of Employees in Plant: _____

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

USE THIS SLIP FOR OCTOBER, 1957 ISSUE ONLY

K-7

FIRST CLASS
PERMIT NO. 36
Cleveland, Ohio

BUSINESS REPLY ENVELOPE
No Postage Stamp Necessary if Mailed in the United States

—4c POSTAGE WILL BE PAID BY—

NEW EQUIPMENT DIGEST
Penton Building
CLEVELAND 13, OHIO

Only those having an engineering, specifying or buying title and connected with a company listed in Dun & Bradstreet as a manufacturer or processer are qualified to receive NEW EQUIPMENT DIGEST on our regular mailing list. The only exceptions to this rule are key men of railroad, steamship and other transportation firms. NEW EQUIPMENT DIGEST is not sent to salesmen, representatives or other distributors.

Only inquiries from individuals who qualify under the above classifications will be serviced if sent to us.

Important

Because we must check the distribution of NEW EQUIPMENT DIGEST at least once each year, please fill-in completely the coupon at the right. If you returned one of our regular mail questionnaires or an inquiry within the past year, you may omit this. The information you give will be held confidential and used only for verifying or correcting our circulation list.

PLEASE FILL IN COMPLETELY—PRINT OR TYPEWRITE

Please send NEW EQUIPMENT DIGEST to me each month free of charge.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Principal Products Manufactured _____

_____ Approximate Number of Employees in Plant _____

Also send NEW EQUIPMENT DIGEST free to the following men in our company:

NAME _____ TITLE _____

NAME _____ TITLE _____

LEBANON'S with CERAMICAST* PROCESS

THIS FLOW DIVIDER AND FUEL SELECTOR FOR A JET ENGINE was called the "monster" by its designers at the Cleveland Division of Parker Aircraft Company. Why? Because the dimensional requirements of the inner passages called for the most extreme quality control in the casting process.

Lebanon engineered a special coring material to meet these requirements and developed special gauges for setting and holding the cores to meet the dimensional tolerances.

LET US TAME YOUR "MONSTER." If your design project utilizes cast steel and requires a high degree of casting quality, CERAMICAST may provide definite quality and cost advantages. Let our engineers discuss the process with you. Write for CERAMICAST literature.

*CERAMICAST *is a registered trademark*

LEBANON STEEL FOUNDRY
120 Lehman Street, Lebanon, Pennsylvania
CARBON, LOW ALLOY AND STAINLESS STEEL CASTINGS

▲ For more details circle NED-1147 K7 on enclosed inquiry slip ▲

Get These Catalogs on

WATER PURIFICATION

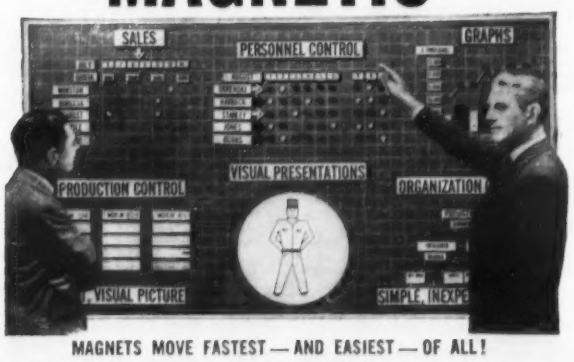
They Can Lead to
SUBSTANTIAL SAVINGS
In Your Plant or Laboratory

CATALOG "G"	Describes BARNSTEAD WATER STILLS in capacities up to 1000 gallons per hour.
CATALOG 127	Shows the Barnstead line of Water Demineralizers in capacities up to 2500 gph.
BULLETIN 141	Newest development in Pure Water Filtration . . . . Barnstead MF SUBMICRON Filter which filters out particles to 0.45 micron.
BULLETIN 139	Presents Barnstead's complete line of tin-lined Piping and Fittings to keep distilled water pure to point of use.
BULLETIN 140	Lists Barnstead's line of Water Demineralizers for Laboratory use.
BULLETIN 128	Describes the Barnstead Pressure Bantam Water Demineralizer. Employs replaceable cartridge.

Barnstead
STILL & STERILIZER CO.
16 Lanesville Terrace, Boston 16, Mass.
FIRST IN PURE WATER SINCE 1878

▲ For more details circle NED-1148 K7 on enclosed inquiry slip ▲

VISUAL MAGNETIC CONTROL



MAGNETS MOVE FASTEST — AND EASIEST — OF ALL!

SIMPLEST VISUAL SYSTEM FOR
- Production
- Personnel
- Sales
- Maintenance
- Scheduling
- Machine Loading
- Charts—Graphs
- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

PRICED FROM $38 INCLUDING MAGNETIC ELEMENTS

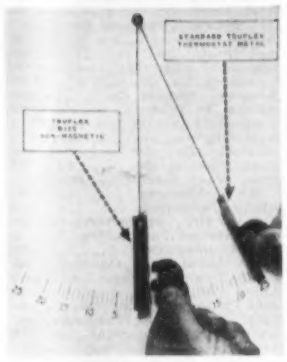
PRICE LIST & BROCHURE NE9 FREE ON REQUEST

REPRESENTATION DESIRED IN SOME AREAS
Methods Research Corp.
442 Mosel Avenue, Staten Island 4, New York

▲ For more details circle NED-1149 K7 on enclosed inquiry slip ▲

New Processes & Materials

THERMOSTAT METAL
almost completely nonmagnetic



Magnetic forces up to 250 oersteds fail to move Truflex S125 nonmagnetic thermostat metal. Heat sensitive elements made from this metal find service in the electrical instrument field where ambient compensation and other thermal functions are necessary, as well as undisturbed magnetic fields. Engineering samples are now available from **Metals & Controls Corp.**, General Plate Div., 1500 Forest St., Attleboro, Mass.

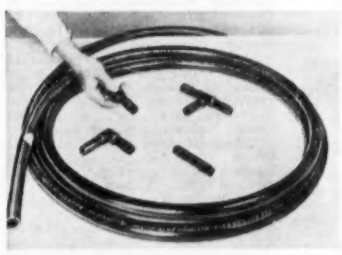
▲ For more details circle NED-1150 K7 on enclosed inquiry slip ▲

FILM FORM ADHESIVE
pressure-sensitive film is improved

Lower release and better conformance to the finished lamination result from improved release sheet now used on Double-Face film form adhesive. Release sheet is also easier to remove from narrow widths, because a dry-edge construction provides a ⅛-in. extension of the release sheet over the adhesive width. This film is particularly applicable for instant bonding of plastic materials to appliances, electronic equipment, leather goods, and in general construction. Made by **Interchemical Corp.**, Angier Adhesives Div., 120-A Potter St., Cambridge 42, Mass.

▲ For more details circle NED-1151 K7 on enclosed inquiry slip ▲

PLASTIC PIPE & FITTINGS
flexible, nontoxic, light in weight



Drinking water, syrups, pulps, acids, alkalies, and chemical solutions can be handled through Acme N. T. Flex plastic pipe and fittings. Made from virgin polyethylene, compounded with nontoxic ingredients, they resist the above materials, growth of mold, and bacteria, and are immune to rot and electrolytic corrosion. Insert type fittings and clamps simplify installation. Nominal ½, ¾, 1¼, 1½, 2 and 3-in. sizes have pressure ratings from 55 to 100 psi. Fittings are offered in various configurations. Made by **Acme Rubber Mfg. Co.**, Dept. PG-60, 115 Meade St., Trenton 3, N. J.

▲ For more details circle NED-1152 K7 on enclosed inquiry slip ▲

NEW!
HANNA FLO-PILOT VALVE HAS DIRT-PROOF SEAL!

Hanna Flo-Pilot Valves will deliver years of dependable performance at a low cost. Every Hanna Flo-Pilot Valve is equipped with a synthetic boot to seal the valve stem and internal parts from dirt and abrasives, elminating the most common cause of valve failure.

Hanna Flo-Pilot Valves are ¼" two and three-way pilot valves for air operation to 150 psi. They are used for remote control of master valves, directional control of small single acting cylinders and for shut-off. There are five models with interchangeable actuating heads: palm button, ball cam, hand lever, locking hand lever, and mechanical link clevis. Same valve can can be used for two or three-way operation either normally open or normally closed to inlet pressure. See classification "Valves" in your local classified directory for your nearest Hanna Representative.

Write for CATALOG 262

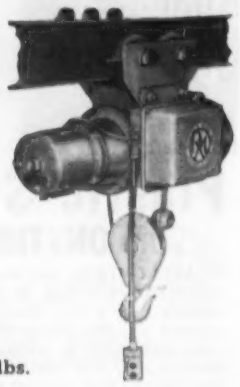
Gives Complete Details

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT • CYLINDERS • VALVES
1759 Elston Avenue • Chicago 22, Illinois

▲ For more details circle NED-1153 K7 on enclosed inquiry slip ▲

R&M HOISTS • CRANES • WINCHES

TYPE "J3"
WIRE ROPE HOIST



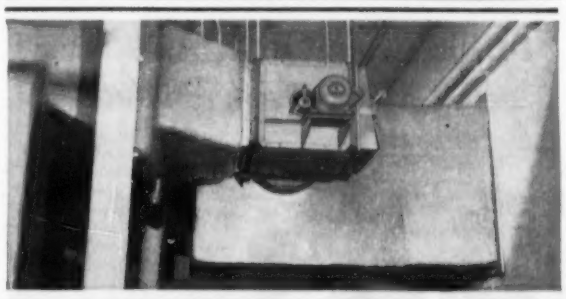
LOW PRICE $680.00*

one or two speeds optional
capacities: 1000—2000—4000 lbs.
write for bulletin 890

Lower limit switch keeps two cable wraps on drum—High torque R & M hoist motor—Two-speed ranges: 60-20, 30-10, 15-5 f.p.m. Single speed: 60, 30, or 15 f.p.m.—Lug, plain, geared, or power trolley mounting—Magnetic disc-type motor brake—Weston-type load brake. Heat treated helical cut gears, and sealed ball bearing equipped throughout. Unit cast, jig bored, aluminum alloy frame. *Price for single speed, lug-mounted hoist 1000, 2000 or 4000 lbs. capacity.

take it up with
ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO | BRANTFORD, ONTARIO

▲ For more details circle NED-1154 K7 on enclosed inquiry slip ▲



Do you like to save money?

That's just what you do the minute you install a Wing Draft Inducer.

First, you save money in capital investment, because no tall, unsightly, expensive stack is needed.

Next, of course, you save money by the elimination of stack maintenance.

Then, you save money on fuel, because you get complete combustion with a Wing Draft Inducer.

And finally, you save money by uninterrupted boiler operation, freed from the uncertainties of natural draft.

If *you'd* like to save money, send for a copy of Wing Draft Inducer Bulletin No. I-57.

L. J. Wing Mfg. Co. 165 Vreeland Mills Road · Linden · N. J.
DIVISION OF AERO SUPPLY MFG. CO. INC.

Wing
DRAFT INDUCERS

FANS • UNIT HEATERS • DRAFT INDUCERS • BLOWERS • TURBINES

▲ For more details circle NED-1155 K7 on enclosed inquiry slip ▲

DFPA TESTED QUALITY

Fir Plywood
LIGHT, STRONG, DURABLE, REAL WOOD PANELS

For: BUILDING AND MAINTENANCE, SHIPPING CONTAINERS, PALLETS, PARTS BINS, PARTITIONS, TANKS, 1000 OTHER INDUSTRIAL USES

MORE versatile than any other material, fir plywood combines the workability of real wood, the economy of large size, the strength and rigidity of engineered panel construction. When you specify DFPA grade-trademarks, you're assured tested quality that meets strict industry requirements.

SEND FOR complete grade, use, specification data

DOUGLAS FIR PLYWOOD ASSOCIATION
Tacoma 2, Wash., Dept. 181 (Good USA Only)
☐ Please send Fir Plywood Purchasing Guide
☐ Information about using plywood for . . .

Name
Title
Firm
Address
City Zone State

▲ For more details circle NED-1156 K7 on enclosed inquiry slip ▲

Plastic Steel® A DEVCON PRODUCT 80% Steel — 20% Plastic

FOR ON-THE-SPOT REPAIRS!

PLASTIC STEEL can save you . . . hundreds of hours . . . thousands of dollars . . . on all types of maintenance and repairs. Use it for repairing leaking pipes, valves, hydraulic systems . . . rebuilding worn valves and castings . . . altering cams and gears . . . repairing and rebuilding machinery . . . making jigs, dies, molds and fixtures . . . doing 1001 on-the-spot repairs that cut lost production time to a minimum.

PLASTIC STEEL is as easy to use as modeling clay . . . bonds to metals, concrete, woods and other surfaces . . . hardens to steel-like strength in just 2 hours — even under water . . . no heat or pressure required . . . unaffected by most solvents, oils or chemicals . . . can be sawed, tapped, drilled or ground by metal-working tools . . . will not shrink, expand, rust or corrode . . . has extreme strength and durability . . . available in 4 types.

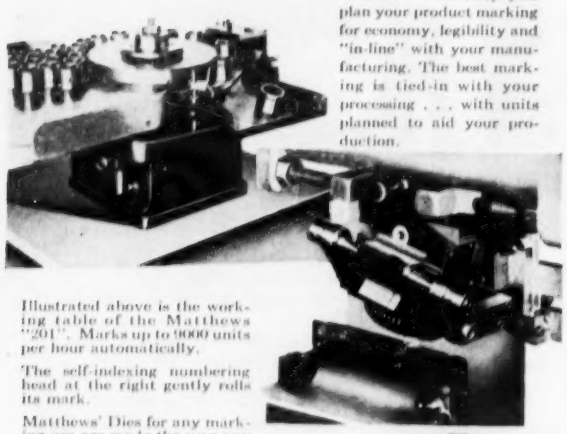
Proven in use by leading manufacturers, PLASTIC STEEL can cut costs, speed production in your plant. FREE booklet describes types of PLASTIC STEEL available, shows a few of the many industrial applications. Write for your copy today.

Nationally distributed by leading industrial suppliers.

DEVCON CORPORATION
140 Endicott Street, Danvers, Mass.

▲ For more details circle NED-1157 K7 on enclosed inquiry slip ▲

PLANNED MARKING
for Planned Production



Matthews can help you plan your product marking for economy, legibility and "in-line" with your manufacturing. The best marking is tied-in with your processing . . . with units planned to aid your production.

Illustrated above is the working table of the Matthews "201". Marks up to 9000 units per hour automatically.

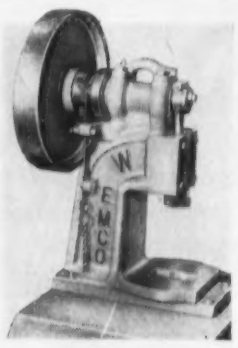
The self-indexing numbering head at the right gently rolls its mark.

Matthews' Dies for any marking use are made the way you want them!

Write today for further information

JAS. H. MATTHEWS & CO.
3943 Forbes St., Pittsburgh 13, Pa.
Museum 1-8500
or TWX PG 424
Offices in Principal Cities

▲ For more details circle NED-1158 K7 on enclosed inquiry slip ▲



Make This Little Giant Work for You

EMCO "W" 5-ton bench type; also larger EMCO "X", 10-ton. Both sizes also stand-mounted. With or without motor drive.

Versatile EMCO presses excel for punching, forming, stenciling and riveting. Up to 300 operations per minute. "Big machine" speed, strength, rigidity, accuracy, endurance, safety. Compact, fool-proof; simple design — easy to operate. Thousands of EMCOS in money-making use testify to Klaas dependability since 1921. Two practical sizes.

Ask for Bulletin N-10

UNUSUAL AIDS TO INDUSTRY

THE KLAAS MACHINE & MANUFACTURING CO.
4310 East 49th St., Cleveland 25, Ohio

KLAAS-BUILT EMCOS

▲ For more details circle NED-1159 K7 on enclosed inquiry slip ▲

Index to Advertisers

A

A & A Mfg. Co., Inc. 12
A & C Engineering Co. 116
A'G'A Div. of Elastic Stop Nut Corp. of America 38, 112
Abell-Howe Co. 89
Abart Gear & Machine Co. .. 42
Abrasive Products, Inc. 35
Ace Plastic Co. 105
Ackerman Mfg. Co. 59
Acromark Co. 75
Acushnet Process Co. 94
Adams, R. P., Co. 5, 90
Aerovent Fan Co., Inc. 11
Aget Mfg. Co. 17
Airetool Mfg. Co. 38
Ajax Electric Co. 86
Alan Wood Steel Co., Penco Metal Products Div. 67
Albion Industries, Inc. 41
Alemite Div., Stewart-Warner 38
All American Tool & Mfg. Co. 5
Allen-Bradley Co. 38
Allied Metal Hose Co. 39
Allied Products Corp. 5
Allied Radio Corp. 42
Allis-Chalmers Mfg. Co. .. 40
Allis, Louis, Co., The 87
Alpha Press & Machine, Inc. 89
Alsop Engineering Corp. 114
Aluminum Co. of America 26, 75
Aluminum Ladder Co. 29
Alvey-Ferguson Co. 88
American Air Filter Co. 47
American Brass Co. 22, 79
American Chain & Cable Co., Wright Hoist Div. 10
American Floor Machine Co. 90
American Machine & Metals, Inc. 106
American Metal Hose Div., American Brass Co. 79
American Meter Co. 82
American Monorail Co. 83
American Optical Co., Safety Products Div. 71
American Recording Chart Co. 27
American Solder & Flux Co. 87
Ames, B. C., Co. 50
Amforge Div., American Brake Shoe Co. 66
Amidon Engineering Co. 28
Anaconda Wire & Cable Co. 22, 79
Anchor Steel & Conveyor Co. 106
Anderson, V. D., Co. 105
Anderson Bros. Mfg. Co. ... 62
Apex Machine & Tool Co. ... 55
Arcos Corp. 82
Armstrong Bray & Co. 44
Armstrong Bros. Tool Co. .. 73
Armstrong & White 81
Aro Equipment Corp. 44
Art Wire & Stamping Co. .. 116
Assembly Products, Inc. 58
Atlantic Abrasive Corp. 58
Atlas Press Co., Clausing Div. 28
Aurand Mfg. & Equipment Co. 11
Aurora Equipment Co. 63
Automatic Transportation Co. 54
Avery Adhesive Label Corp. 47

B

Babcock & Wilcox Co., The Tubular Products Div. .. 44
Bahnson Co. 26
Barksdale Valves 105
Barnstead Still & Demineralizer Co. 117
Bassick Co. 78
Bathey Mfg. Co. 84
Bausch & Lomb Optical Co. 83
Bean, John, Industrial Sales Dept., Div. of Food Machinery & Chemical Corp. 43
Beaver Pipe Tools, Inc. 36
Beck Equipment Co. 53
Beckett-Harcum Co. 46
Bell Automation Corp. 2
Bellows Co. 46
Bendix Aviation Corp. 100
Bennett Mfg. Co. 104
Beverly Shear Mfg. Co. 101
Biddle, James G., Co. 16
Big Joe Mfg. Co. 43
Binks Mfg. Co. 110
Black & Decker Mfg. Co. .. 63
Black Diamond Saw & Machine Works 113
Black Drill Co. 103
Blaw-Knox Equipment Div., Blaw-Knox Co. 41
Bokum Tool Co. 61
Bostitch, Inc. 17
Boston Gear Works 69
Bowser, Inc. 89
Breeze Corp. 75
Brown Engineering Co. 75
Brown, W. R., Corp. 98
Browning Mfg. Co. 2
Buck Tool Co. 119
Buffalo Weaving & Belting Co. 84
Builders-Providence, Inc., Div. of B-I-F Industries, Inc. .. 116
Burgess-Manning Co. 92
Buschman, E. W., Co. 8
Bussmann Mfg. Co. 60, 61

C

C. E. M. Co. 9
Cabot, Samuel, Inc. 78
Calculagraph Co. 89
Cambridge Wire Cloth Co. .. 44
Canton Stoker Corp., Wagner Pump Div. 20
Carey Electronic Engineering Co. 109
Carpenter Steel Co. 22, 86
Carter Controls, Inc. 66
Celcote Co. 112
Celluplastic Corp. 73
Chain Belt Co. 66
Chesley Industries 16
Chicago Eye Shield Co. 52
Chicago Rawhide Mfg. Co. .. 6
Chicago-Wilcox Mfg. Co. .. 18
Chisholm-Moore Hoist Div. . 9
Cincinnati Lathe & Tool Co. 49
Cincinnati Tool Co., The .. 99
Clark-Cutler-McDermott Co. . 72
Clark Equipment Co. 77
Clarke Sanding Machine Co. 66
Clayton Mfg. Co. 10
Cleveland Crane & Engineering Co. 22, 77
Cleveland Grinding Machine Co. 11
Cleveland Tramrail Div., Cleveland Crane & Engineering Co. 22
Cleveland Vibrator Co. 43
Cleveland Worm & Gear Co. 45
Climax Metal Products Co. .. 42
Clippard Instrument Laboratory, Inc. 61
Coffing Hoist Div., Duff-Norton Co. 48
Colonial Rubber Co. 57
Colson Corp. 63
Columbia Electric Mfg. Co. . 101
Columbia-Geneva Steel Div. .. 81
Columbian Vise & Mfg. Co. . 62
Columbus McKinnon Chain Corp. 8
Commander Mfg. Co. 14
Commercial Shearing & Stamping 40
Conco Engineering Works .. 104
Condersite Engineering Corp. 54
Cone Drive Gears, Div. Michigan Tool Co. 70
Conforming Matrix Corp. .. 94
Consolidated Electrodynamics Corp., Rochester Div. 71
Continental Gin Co. 56
Continental Machine Co. ... 34
Conveyor Specialty Co. 62
Convoy, Inc. 100
Corning Glass Works 67
Cover, H. S. 8
Crane Co. 43
Crane Packing Co. 79
Cunningham, M. E., Co. .. 33
Curran Corp. 12
Cutler-Hammer, Inc. 93

D

Dake Corp. 102
Danly Machine Specialties, Inc. 3
Dayton Rogers Mfg. Co. ..37, 74
Defiance Machine & Tool Co. 120
Delaware Barrel & Drum Co. 67
Delta Power Tool Div., Rockwell Mfg. Co. 92
Deluxe Metal Furniture Co. . 88
Deming Co. 38
Denison Engineering Div., American Brake Shoe Co. 95
Detroit Hoist & Machine Co. 35
Detroit Power Screwdriver Co. 81
Detroit Stamping Co. 10
Detroit Testing Machine Co. 65
Deublin Co. 69
Devcon Corp. 118
DeVilbiss Co. 106
Dialight Corp. 49
Diebold, Inc. 108
Dillon, W. C., & Co. 115
Dimco-Gray Co. 6
Dings Magnetic Separator Co. 102
Dixon Automatic Tool, Inc. .. 13
DoAll Co., The 9
Dockson Corp. 34
Dodge Mfg. Co. 99
Dollinger Corp. 39
Dorr-Oliver, Inc. 86
Douglas Fir Plywood Association 117
Dow Corning Corp. 35, 86
Downs Crane & Hoist Co. .. 15
Dravo Corp. 53
Dresser Mfg. Div. 101
Driv-Lok Pin Co. 48
Dry Clime Lamp Corp. 64
Du-All Templates 72
Duff-Norton Co. 3, 48
Dundick Tool Works, Inc. . 107
Duo-Fast 60
Durabla Mfg. Co. 70
Durant Mfg. Co. 46
Durkee-Atwood Co. 57
Dust Suppression & Engineering Co. 64
Dwyer, F. W., Mfg. Co. ... 96

E

Eastern Machine Screw Corp. 74
Eastman Kodak Co. 37, 51, 87, 103
Eaton Mfg. Co., Reliance Div. 62
Economy Engineering Co. .. 73
Edmont Mfg. Co. 77
Edmund Scientific Corp. 119, 120
Elastic Stop Nut Corp. of America 38, 112
Electric Controller & Mfg. Co., Div. of Square D. Co. 81
Electric Storage Battery Co. 83
Electrolift, Inc. 58
Elgin National Watch Co., Abrasives Div. 41
Elliott Co. 71
Equipment Mfg., Inc. 42
Equipto Div., Aurora Equipment Co. 63
Erickson Tool Co. 24
Eriez Mfg. Co. 43, 90
Euclid Crane & Hoist Co. ... 112
Evans Rule Co. 32
Exact Weight Scale Co. 72
Ex-Cell-O Corp. 23, 114
Exide Industrial Div., Electric Storage Battery Co. 83

F

Fafnir Bearing Co. 90
Fairbanks-Morse & Co. 13
Falls Engineering & Machine Co., The 94
Famco Machine Co. 4
Farquhar, A. B., Div., Oliver Corp. 98
Farrelloy Co. 120
Farval Corp. 63
Fastener Corp. 60
Fastex Div., Illinois Tool Works 69
Fastway Fasteners, Inc. 7
Fauver, J. N., Co., Inc. 8
Fawick Airflex Div., Fawick Corp. 70
Federal Press Co. 80
Federal Process Co. 30
Federal Products Corp. 15
Federal Tool & Mfg. Co. 72
Felters Co. 50
Fenwal, Inc. 60
Ferguson, Harry J., Co. 91
Fidelity Chemical Products Corp. 81
Field, Walter W., & Son, Inc. 74
Filtros, Inc. 74
Finnell System, Inc. 65
Fischer & Porter Co. 12
Flexaust Co. 10
Flexible Steel Lacing Co. .. 72
Flexible Tubing Corp. 27
Flexo Products, Inc. 14
Flexonics Corp. 54
Flexrock Co. 120
Flightex Fabrics, Inc. 46
Foley Mfg. Co. 112
Food Machinery & Chemical Corp. 43, 79
Foote Bros. Gear & Machine Corp. 18
Formica Corp. 17
Foster, L. B., Co. 96
Fostoria Pressed Steel Corp. 101
Foxboro Co. 5, 82
Freeway Washer & Stamping Co. 55
Friez Instrument Div. Bendix Aviation Corp. 100
Frommelt Industries 96
Fuller Co. 19

G

Gardner-Denver Co. 58
Gardner Machine Co. 66
Garland Co., The 14
Garlock Packing Co. 71
Garrett Oil Tools, Inc. 20
Gary Grating Div., Rockwell Spring & Axle Co. 64
Gast Mfg. Corp. 97
Gay-Lee Co. 57
General Plate Div., Metals & Controls Corp. 67
General Radio Co. 57
General Scientific Equipment Co. 9
General Tire & Rubber Co. .. 25
Genesee Machine Builders, Inc. 70
Gerrard Steel Strapping Div., U. S. Steel Corp. 112
Gleason Reel Corp. 108
Globe Co., The 60
Globe Hoist Co. 64
Goodrich, B. F., Tire Co., A Div. of The B. F. Goodrich Co. 23
Goodyear Tire & Rubber Co. 15, 27, 39
Gordon, Claud S., Co. 70
Gorton, George, Machine Co. 26
Goulds Pumps, Inc. 45
Govro-Nelson Co. 18
Graham Transmissions, Inc. 96
Granet Corp., The 74
Graphic Systems 64
Gravely Tractors, Inc. 73
Gray Co., Inc. 55
Graybar Electric Co., Inc. .. 9
Greaves Machine Tool Co. .. 97
Greenlee Bros. & Co. 87
Greenlee Tool Co. 63
Gries Reproducer Corp. 111
Grinnell Co. 113
Grip Nut Co. 76
Guardian Electric 108
Gulf Oil Corp. 95

H

Hallemite Mfg. Co. 106
Hamilton Caster & Mfg. Co. 19
Hamilton Tool Co. 13, 15
Hammond Machinery Builders, Inc. 5
Handy & Harman 30
Hanna Engineering Works .. 117
Hannifin Corp. 41, 86
Hansen, A. L., Mfg. Co. ... 40
Hansen Mfg. Co. 64
Henry Mfg. Co., Inc. 66
Hetherington & Berner, Inc. . 22
Hewitt-Robins 95
Hild Floor Machine Co. 3
Hollaender Mfg. Co. 31
Homelite, A Div. of Textron, Inc. 48
Hoover Ball & Bearing Co. .. 50
Hossfeld Mfg. Co. 61
Houghton, E. F., & Co. ... 114
Hunt, C. B., & Son, Inc. .. 93
Hydraulic Mfg. Co. 7

I

Ideal Industries, Inc. 19
Illinois Testing Laboratories, Inc. 31, 78
Index Machine Co. 76
Inductotherm Corp. 102
Industrial Filtration Co. 101
Industrial Gear Mfg. Co. .. 107
Industrial Products Co. ...2, 12
Industrial Retaining Ring Co. 104
Industrial Shredder & Cutter Co. 113
Ingersoll-Rand Co. ...30, 61, 83
Injection Molders Supply Co. 70
International Nickel Co. ... 58
International Research & Development Corp. 92
Ironbound Box & Lumber Co. 16
Island Equipment Corp. 32

J

Jabsco Pump Co. 10
Jack & Heintz, Inc. 73
Jaco Devices, Inc. 96
Jarvis & Jarvis, Inc. 53
Jeffrey Mfg. Co. 111
Jelliff, C. O., Mfg. Corp. .. 11
Jenkins Bros. 107
Johns-Manville Corp., Dutch Brand Div. 19
Johnson Mfg. Corp. 23
Jomac, Inc. 19
Jones, Howard B., Div., Cinch Mfg. Corp. 20
Joy Mfg. Co. 27

K

Kaddis, A. G., Screw Products, Inc. 114
Kano Laboratories 20
Kent Co. 80
Kester Solder Co. 63
Kett Tool Co. 110
Kidde, Walter, & Co., Inc... 47
Klaas Machine & Mfg. Co. .. 118
Klipfel Valves, Inc. 88
Korfund Co. 97
Kramer, H. W., Co. 115
Krieg, Victor J., Inc. 113

L

L-W Chuck Co. 64
Labelon Tape Co. 84
La Favorite Rubber Mfg. Co. 79
Lake Chemical Co. 10
Lapeer Mfg. Co. 40
Lebanon Steel Foundry 117
Lehigh Safety Shoe Co. 2
Leiman Bros., Inc. 51
Lepel High Frequency Laboratories, Inc. 53
Lermer Plastics, Inc. 38
Leslie Co. 13
Lewis-Shepard Products, Inc. 48
Linde Co., Div. of Union Carbide Corp. 53
Linemaster Switch Corp. 93
Link-Belt Co. 35, 59
Liquidometer Corp., The 116
Littell, F. J., Machine Co. .. 51
Littleford Bros., Inc. 50
Logan Co. 4
Logan Engineering Co. 111
Lovejoy Flexible Coupling Co. 75
Lucas Milhaupt Engineering Co. 80
Lug-All Co., The 7
Lunkenheimer Co. 52

M

M B Mfg. Co., A Div. of Textron Inc. 95
MacLean-Fogg Lock Nut Co. 109
McGill Mfg. Co. 15, 68
Magline Inc. 34
Mamaux, A., & Son 2
Manheim Mfg. & Belting Co. 30, 77
Marsh Instrument Co. 111
Marshalltown Mfg. Co. 40
Marvel Industries, Inc. 6
Marvellum Co., The 105
Mason-Neilan Div. of Worthington Corp. 45
Matthews, Jas. H., & Co. .. 118
May-Fran Engineering, Inc... 28
Mead Specialties Co. 52
Mercoid Corp. 116
Metals & Controls Corp. ..53, 67
Methods Research Corp. 117
Metzgar Conveyor Co. 80
Meyercord Co. 104
Meyers, W. F., Co. 36
Michigan Chrome & Chemical Co. 8
Michigan Oven Co. 26
Micro-Switch, a Div. of Minneapolis-Honeywell Regulator Co. 32
Miller Dial & Name Plate Co. 6
Miller Sewer Equipment, Inc. 3
Miller Sewer Rod Co. 120
Minster Machine Co., The .. 4
Mixing Equipment Co. 33
Modern Machine Tool Co. .. 84
Mono-Seal Products 9
Morris Machine Works 80
Morse Mfg. Co. 49
Mortell, J. W., Co. 27
Mosinee Paper Mills Co. 73
Moto-Truc Co. 51
Mueller Brass Co. 87
Multistamp Co. 84
Mystik Adhesive Products, Inc. 45

N

NRC Equipment Corp. 24, 109
Nagel Pumps, Inc. 102
Nailing Machine Section, Food Machinery & Chemical Corp. 79
National Acme Co. 29
National Air Sander, Inc. .. 98
National Electric Products .. 65
National Machine Products .. 68
National Screw & Mfg. Co. .. 65
National Standard Co. 37
National Vulcanized Fibre Co. 48
Naylor Pipe Co. 104
New Departure Div. of General Motors Corp. ... 110
Newark Wire Cloth Co. ... 82
Niagara Blower Co. 81
Nielsen, E. V., Inc. 4
Noreen, C. A., Co. 99
Northwestern Tool & Engineering Co. 71
Norton Co. 46
Nu-Matic Grinders, Inc. 12
Nye Tool Co. 5

O

OPW Corp., Jordan Corp. Div. 34
Ohio Brass Co. 33
Ohio Gear Co. 120
Ohio Nut & Bolt Co. 4
Oliver Corp., A. B. Farquhar Div. 98
Olson, Samuel, Mfg. Co., Inc. 52
Onan, D. W., & Sons, Inc... 99
O'Neil-Irwin Mfg. Co. 76
Orangeville Mfg. Co. 108
Overbeke-Kain Co. 39
Owatonna Tool Co. 104

P

Palley Supply Co. 108
Palmer, Harold L., Co. 40
Palmer Thermometers, Inc... 44
Palnut Co. 36
Pangborn Corp. 94
Pannier Corp. 39
Parker Appliance Co. 25
Parker-Kalon Div., General American Transportation Corp. 67
Parker Sweeper Co. 36
Parr Mfg. Corp. 115
Pasadena Hydraulics Inc. .. 82
Patton-MacGuyer Co. 90
Pedrick Tool & Machine Co... 33
Peerless Electric Co. 93
Peerless Wire Goods Co. 71
Penberthy Mfg. Co. 8
Penco Metal Products Div., Alan Wood Steel Co. 67
Penetone Co., The 56, 57
Perfecting Service Co. 17
Pettibone Mulliken Corp. 47
Pfaudler Co. 20
Pike, E. W., & Co. 103
Pine, William S. 106
Pines Engineering Co. 24, 99
Pioneer Rubber Co. 35
Pneu-Trol Devices, Inc. 85
Polymer Corp. of Penna. .. 18
Portage Double-Quick Tool Co. 43
Porter, H. K., Inc. 114
Porter, H. K., Company, Inc., Quaker Rubber Div. 54
Porter-Cable Machine Co. .. 65
Potdevin Machine Co. 79
Potts, Horace T., Co., Speedline Stainless Steel Fittings Div. 67
Power-Curve Conveyor Co. .. 115
Prab Conveyor Co. 12
Prat-Daniel Corp., Thermobloc Div. 17
Preis, H. P., Engraving Machine Co. 85
Production Instrument Div. of General Controls Co. 82
Propellair Div., of Robbins & Myers, Inc. 37
Proportioneers, Inc., Div. of B-I-F Industries, Inc. 11
Protectoseal Co. 83
Proto Tools 16
Punch-Lok Co. 90
Purolator Products, Inc. ... 88
Pyles Industries, Inc. 59

Q

Quaker Rubber Div., H. K. Porter Company, Inc. .. 54
Quickdraft Corp. 25
Quincy Compressor Co. 85

R

Ramsey Corp. 68
Randall Graphite Bearings, Inc. 31
RapiDesign Inc. 78
Rapids-Standard Co. 22, 69
Rauland-Borg Corp. 31
Raymond Corp., The 32, 98
Redi-Bolt, Inc. 18
Reed Mfg. Co. 107
Reeves Pulley Co., Div. of Reliance Electric & Eng. Co. 68
Reliance Electric & Engrng. Co. 34
Reliance Steel Products Co... 74
Republic Mfg. Co. 29
Republic Steel Corp. 14
Research-Cottrell, Inc. 91
Research Products Corp. 60
Resolite Corp. 41
Revco, Inc. 56
Revolvator Co. 25
Reynolds Wire Div., National Standard Co. 37
Reznor Mfg. Co. 102
Rhodes, M. H., Inc. 32
Richard Brothers Punch Div., Allied Products Corp. 5
Richards, J. A., Co. 9
Richardson Co., The 74
Riehle Testing Machines Div., American Machine & Metals, Inc. 106
Robbins & Myers, Inc., Hoist & Crane Div. 117
Roberts, Weldon, Rubber Co. 107
Rock-Tred Corp. 113
Rockwell Mfg. Co. . 92, 103, 110
Rockwell Mfg. Co., Nordstrom Valve Div. 103
Rockwood Sprinkler Co. 95
Rodgers Hydraulic Inc. 36
Roll & File Systems, Inc... 106
Roll-A-Reel 80
Roper, Geo. D., Corp. 94
Rotac Div., Ex-Cell-O Corp. 114

Rotary Lift Co. 36
Roth Rubber Co. 14
Round, David, & Son, Inc... 93
Ruby Chemical Co. 84
Russell & Stoll Co., Inc. .. 111

S

SKF Industries, Inc. 60, 61
Sabin Machine Co. 101
Saginaw Products Corp. .. 93
Sahlin Engineering Co. 76
Salem-Brosius, Inc. 30
Sands Safety Valve Co. 6
Sarco Co., Inc. 87, 89
Scherr, George, Co. 22
Schmidt, Geo. T., Inc. 112
Schrader's, A., Son, Div. of Scovill Mfg. Co., Inc. ..23, 108
Schutte & Koerting Co. 28
Sellers Injector Corp. 14
Sessions, J. H., & Son 88
Set Screw & Mfg. Co. 105
Severance Tool Industries, Inc. 37
Sexauer, J. A., Mfg. Co. .. 111
Sheffield Corp., The 45
Sheldon Machine Co. 101
Shepard Niles Crane & Hoist Corp. 87
Shoe Form Co. 92
Shuford Mills, Inc. 16
Signode Steel Strapping Co. 32, 77
Simplatrol Products Corp. .. 105
Simplicity Engineering Co. .. 70
Sintz, Claud, Inc. 110
Skinner, M. B., Co. 99
Smit, J. K., & Sons, Inc. .. 78
Smith, A. O., Corp. 3
Snap-On Tools Corp. 88
Sommer Metalcraft Corp. .. 112
Sonoco Products Co. 25
Soreng Div., Controls Corp. of America 44
South Bend Lathe Works 102
South Chester Corp. 98
Southern Screw Co. 72
Southwestern Engineering Co. 68
Spaulding Fibre Co. 69
Speed Selector Inc. 88
Speedline Stainless Steel Fittings Div., Horace T. Potts Co. 67
Spencer Thermostat Div., Metals & Controls Corp... 53
Spray Engineering Co. 56
Spraying Systems Co. 51
Sprout-Waldron & Co. 34, 91
Square D Company ..35, 52, 97
Square D Co., Electric Controller & Mfg. Co. Div. 81
Stackbin Corp. 55
Stackpole Carbon Co. 96
Standard Conveyor Co. 84
Standard Industrial Products Co. 37
Standard Instrument Corp. .. 17
Standard Pressed Steel Co. 30, 47, 91, 106
Stanley Works 92
Statham Development Corp.. 7
Sta-Warm Electric Co. 13
Stearns Electric Corp. 120
Stearns Magnetic Products, A Div. of Indiana Steel Products Co. 119
Steel City Testing Machines, Inc. 54
Stephens-Adamson Mfg. Co. 29, 86
Stevens Mfg. Co., Inc. 3
Sturdy Broaching Service, Inc. 24
Sturtevant Mill Co. 80
Summit Products Co. 97
Sunroc Corp. 55
Sugar Beet Products Co. 56
Superior Pneumatic & Mfg. Inc. 54
Superior Tube Co. 57
Suretv Rubber Co. 91
Sutorbilt Corp. 76
Sutton Mfg. Corp. 68
Swartwout Co. 50
Synthane Corp. 42

T

Taylor Instrument Companies 65
Tennessee Coal & Iron Div. 81
Ther Electric & Machine Works 28
Thomas & Betts Co. 95
Thomson Industries, Inc. 113
Tinnerman Products, Inc. .. 46
Tipp Manufacturing Co. .. 108
Tokheim Corp. 109
Tonkins-Johnson Co. 18
Torit Mfg. Co. 13
Towmotor Corp. 103
Townsead Co. 100
Trent, Inc. 11
Trombetta Solenoid Corp. .. 76
Tropical Paint Co. 6
True Temper 47
Tru Seal Div., Flick-Reedy Corp. 107
Tube-Strut Corp. 94
Twin Disc Clutch Co. 28
Tyler Mfg. Co. 26
Ty-Sa-Man Machine Co. .. 116

U

Udylite Corp. 69
Union Carbide Corp., Linde Co. Div. 53
Uhrden, Inc. 97
Union Metal Mfg. Co. 60, 61
Union Steel Products Co. .. 62
U. S. Burke Machine Tool Div. 62
U. S. Graphite Co. 12
U. S. Hoffman Machinery Corp. 96
U. S. Steel Corp. 42, 81, 112
U. S. Steel Export Co. 81
U. S. Steel Supply Div. 81
U. S. Stoneware Co. 66
U. S. Tool Co. 58
Universal Engineering Co. .. 49

V

Vaco Products Co. 99
Veeder-Root, Inc. 50
Vernon Devices, Inc. 98

W

W-K-M Div. of ACF Industries, Inc. 100
Wales-Strippit Corp. 85
Walker, O. S., Co., Inc. .. 56
Wallace, J. D., & Co., Inc... 100
Walton Co., The 48
Warner Electric Brake & Clutch Co. 102
Wassell Organization, Inc... 10
Waterloo Valve Spring Compressor Co. 104
Watlow Electric Mfg. Co. .. 54
Watts Regulator Co. 16
Wayne Mfg. Co. 109
Webb, Jervis B., Co. 7
Weber Marking Systems Div. of Weber Addressing Machine Co. 59
Webster Instrument Inc. ... 49
Wedge-Wire Corp. 26
Weller Electric Corp. 45
Wells Mfg. Corp. 115
West Bend Equipment Corp.. 105
Western Chemical Co. 5
Western Insulated Wire Co.. 100
Wheeler Reflector Co. 114
White, S. S., Industrial Div. 85
White, S. S., Plastics Div... 24
Whitehead Metal Products Co., Inc. 21
Wiegand, Edwin L., Co. 4, 75
Will-Burt Co., The 97
Wilmad Glass Co. 109
Wilton Tool Mfg. Co. 100
Wing, L. J., Mfg. Co. ..24, 117
Winnen Incinerator Co. 59
Winsmith, Inc. 52
Winzeler Mfg. & Tool Co. .. 51
Wire & Iron Products, Inc. 72
Wollensak Optical Co. 110
Wolverine Equipment Co. 20
Wood Shovel & Tool Co. ... 109
Worcester Valve Co., Inc. .. 116
World Dryer Corp. 85
Worthington Corp. 23, 25, 27, 29, 31, 33
Wright Hoist Div., American Chain & Cable Co. 10

Y

Yale & Towne Mfg. Co. ..19, 78
Yarnall-Waring Co. 83

Z

Zagar, Inc. 2
Zippertubing Co., The 7

Index to Products

A

Abrasive Products 22, 35, 46, 58, 66, 80, 88, 99, 107
Adhesives 39, 117
Air Conditioning Equipment 46, 81
Alloys 21, 87, 110, 114, 117
Aluminum 18, 21
Assembling Machines 81

B

Balancing Equipment 62, 92
Balls 105
Bearings 15, 24, 29, 31, 50, 55, 56, 60, 61, 87, 90, 99, 104, 110, 113
Belting 30, 72, 77, 115
Benders 9, 25, 33, 61, 63, 76, 99
Bins & Boxes 8, 14, 55, 84, 92, 100, 104
Bolts 12, 65, 72, 75
Boring Machines 103
Brakes 15, 55, 72, 102, 105
Brazing Equipment & Materials 30, 80
Broaching Equipment 58, 116
Bronze 21
Brushes, Electric 12
Building Materials 41
Buildings 48, 108
Bushings 114
Bushings, Drill 114

C

Car Spotters 86
Cases & Chests 104
Casters 19, 25, 36, 41, 53, 78, 93, 94
Castings 108, 117
Cements, Repair 86, 106, 111, 113, 118, 120
Chains & Fittings 8, 94
Charts 100
Chucks 19, 20, 24, 106, 119
Clamping Devices 10, 13, 21, 40, 62, 75, 89, 90, 99, 100
Clamps, Lifting 13, 15
Cleaners, Air 5, 86, 90
Cleaners, Drain 3, 7, 120
Cleaners, Vacuum 3, 5, 19, 64, 66, 80, 90, 96, 100
Cleaning Equipment, Blast .. 14
Cleaning Machines 63, 81, 83, 90
Cleaning Materials 12, 56, 57, 78, 113, 119
Clutches 4, 7, 28, 70, 72, 93, 102, 105, 120
Coating Equipment 79
Coatings, Protective 9, 69, 81, 87, 109, 113
Communications Equipment 31, 33, 91
Compressors 23, 29, 31, 58, 61, 85, 91, 116
Condensation Preventive 27
Containers 6, 8, 38, 69, 73
Controls, Air & Hydraulic 1, 6, 44, 46, 67, 117
Controls, Bin Level 84, 95
Controls, Electric 26, 32, 38, 43, 45, 53, 63, 71, 79, 88, 93, 96, 97, 108, 111
Controls, Level 35, 88
Controls, Pressure & Temperature ..1, 3, 5, 12, 13, 20, 35, 40, 43, 45, 53, 60, 61, 82, 86, 89, 102, 106, 114, 116
Controls, Production 10, 64, 117
Controls, Remote 1, 41, 52, 65
Conveyor Accessories 4, 7, 9, 16, 18, 27, 35, 97, 106, 108
Conveyors 8, 12, 19, 20, 22, 28, 32, 43, 52, 62, 66, 70, 80, 84, 88, 91, 98, 104, 115
Coolant Systems 77
Counting Devices 10, 39, 46, 50, 82
Couplings, Flexible 11, 15, 42, 56, 59, 75, 116
Crane Accessories 42, 81
Cranes 22, 47, 64, 80, 87, 89, 104, 106, 114
Crushers 111
Cutoff Machines 36, 92
Cutters, Metal 21, 76, 114
Cutting Equipment, Gas 34, 53, 93
Cutting Machines, Die 94
Cylinders, Air & Hydraulic.. .....18, 40, 41, 61, 66, 108

D

Deburring Equipment 24, 37, 98, 115
Dies & Accessories 3, 37, 40, 49, 74, 98
Dispensers 2
Dock Covers 96
Dockboards & Ramps 12, 34, 36, 95, 116
Doors, Industrial 74
Draft Inducers 25, 117
Drafting Equipment 20, 31, 35, 47, 72, 78, 106
Drill Attachments 2
Drilling Machines 15, 18, 18, 44, 49, 63, 66, 87
Drills & Accessories 8, 103
Drills, Masonry 35, 99
Drives, Variable Speed 2, 14, 21, 45, 57, 68, 75, 88, 96
Dryers, Hand 85
Drying Equipment 5, 64, 96
Ducts 112
Dust Collectors 5, 13, 17, 19, 20, 47, 64, 85, 86, 91

E

Electric Plants 48, 79, 94
Electronic Equipment 32, 42, 96, 114
Elevating Equipment 13, 36, 50, 64, 73, 85, 105
Engines, Industrial 39, 70, 88, 99
Engraving Machines 85
Envelopes, Transparent 67
Exhausters 25, 116
Expanders, Tube 71
Extractors 48

F

Fabricating Equipment 24, 101, 112
Fabrics 46, 105
Fans & Blowers 11, 19, 37, 68, 90
Fastening Devices 1, 3, 4, 7, 9, 11, 12, 21, 25, 30, 36, 38, 46, 47, 48, 55, 62, 65, 67, 68, 72, 75, 76, 91, 98, 100, 104, 105, 106, 109, 111
Faucet Repairs 111
Feeders 2, 20, 36, 46, 51, 66, 76, 81, 90, 108
Filing Machines 5
Filtering Equipment 15, 39, 46, 55, 66, 74, 86, 88, 90, 101, 109, 114
Finishes 6, 35, 38
Finishing Equipment 60, 94, 115
Finishing Equipment, Blast 7, 94
Fire Extinguishing Equipment 47
Flexible Shaft Equipment .. 57
Floor Machines 47, 65, 75, 80, 90, 100, 109
Flooring Materials 21, 26, 41, 60, 64, 74, 81, 86, 103, 120
Forgings 66
Furnaces, Industrial 24, 86, 102
Fuses 60, 61

G

Gages, Level 8, 31, 37, 116
Gages, Precision 15, 16, 22, 45, 50, 62, 97, 107
Gages, Pressure & Temperature 22, 23, 49
Gearing 18, 42, 51, 69, 84, 107, 120
Generators, Steam 10, 92
Glass Products 67, 109
Gloves, Industrial 17, 19, 35, 74, 77, 91
Goggles 52, 71
Grating 4, 60, 64, 74
Grinding Equipment 11, 12, 23, 30, 38, 47, 63, 113
Guns, Blow 4, 52, 69
Guns, Sealant 59

H

Hammers & Mallets 47
Hardware 65, 88, 95, 100
Heat Exchangers 67, 81, 92
Heaters, Compound 13
Heaters, Electric 4, 11, 29, 40, 54, 75, 110
Heaters, Electronic & Induction 40, 53, 82
Heaters, Unit 17, 24, 53, 102
Hoists 7, 9, 10, 35, 48, 58, 93, 108, 112, 117
Holloware, Fiber 48, 69
Hose & Fittings 10, 21, 34, 39, 54, 64, 75, 79, 90, 93, 103, 108, 114
Humidifiers 26

I

Incinerators 59
Indicators, Flow 28
Indicators, Pressure & Temperature 5, 31, 70
Infrared Equipment 64, 101, 106
Inspection Equipment 42, 83, 103, 119, 120
Instruments, Electric 12
Insulation, Electric 42

J

Jacks 3, 14, 44, 104
Jacks, Leveling 95
Joints, Rotating 69, 83

K

Keyseater 87

L

Labels & Name plates 6, 16, 47, 84, 104, 105
Ladders 29
Laminated Materials 17
Lighting Equipment 9, 17, 49, 51, 68, 71, 77, 83, 114
Lights, Pilot 49
Lockers & Shelving 55, 63, 67, 88, 106
Lubricating Equipment & Materials 8, 16, 20, 21, 22, 63, 86, 95, 99, 114, 115

M

Machine Tool Accessories ... 1, 24, 26, 28, 43, 73, 74, 84, 104
Machine Tools..28, 38, 56, 58, 62, 75, 76, 97, 101, 102, 111, 116
Magnetic Equipment 16, 52, 102, 119
Marking Equipment 1, 26, 33, 36, 39, 41, 59, 75, 81, 82, 84, 112, 116, 118, 120
Materials Handling Equipment 6, 15, 16, 30, 32, 48, 49, 59, 60, 61, 62, 69, 77, 85, 95, 97
Materials Handling, Overhead 83, 88, 106, 108
Metals, Embossed & Perforated 120
Meters, Flow .. 25, 76, 110, 116
Meters, Tong Test 37, 101
Milling Fixtures 74
Mixing Equipment 20, 29, 33, 34, 59, 80, 110, 114
Mold Release 70
Motors, Electric 3, 34, 52, 59, 61, 70, 73, 78, 79, 87, 90, 93, 104

N

Nailing Machines 79
Nozzles, Spray 51, 56
Nuts 30, 36, 38, 65, 68, 72, 75, 76, 91, 109

O

Office Equipment 42, 74, 98, 100, 105, 108, 116
Ovens, Industrial 26, 73, 81, 101, 106

P

Packaging Equipment & Materials 34, 38, 52, 73, 92
Packings & Gaskets 18, 31, 68, 79
Paint Removers 53
Paper Products 73
Partitions 51, 72
Parts, Precision 109, 120
Pen, Chart 27
Photoelectric Equipment 102
Photographic Equipment 78, 87, 116
Pipe & Fittings 22, 28, 31, 44, 57, 67, 73, 79, 94, 97, 98, 99, 101, 104, 107, 117
Pipe & Thread Compounds 30, 101
Pipe Tools & Machines 5, 25, 107
Plastics 18, 41, 42, 74, 98, 109, 110, 111
Plating Equipment 1, 101
Plugs & Caps 24, 69
Plywood 117
Power Units, Hydraulic 48, 95, 106, 114, 116
Presses 4, 36, 41, 76, 77, 80, 82, 89, 102, 118
Presses, Molding 64
Process Equipment 98, 110
Production Facilities 28, 50, 114
Projectors 51
Pullers 7, 44, 104
Pulley, Lagging 54
Pulleys & Sheaves 2, 75, 116
Pumps 3, 5, 10, 13, 17, 25, 27, 30, 32, 33, 38, 43, 45, 55, 80, 86, 89, 94, 95, 102, 106, 109, 110, 114
Pumps, Air & Vacuum 50, 51, 54, 68, 71, 76, 97
Pumps, Chemical 11
Punches 5, 38, 85

R

Racks 28, 31, 42, 75, 94
Recorders 12, 17
Rectifiers 5, 28
Reels, Cord 51, 108
Reels, Stock 80
Refrigeration Equipment 56
Relays 33, 85, 112
Reproduction Equipment & Materials 37, 66, 86, 115
Resistors 96
Respirators 8, 14
Rod, Threaded 18, 110
Rollers 4
Rubber Products 14, 57, 84, 86, 94, 111
Rules, Tape 32
Rust Preventives 14, 105, 114

S

Safety Equipment 2, 9, 12, 21, 26, 37, 41, 43, 51, 58, 60, 64, 68, 74, 76, 81, 83, 116
Saw Blades 9, 26, 36, 45, 57, 110
Saws, Masonry 84
Saws, Metal & Wood 23, 92, 93, 100, 110, 113, 115, 116
Scaffolding .. 6, 28, 31, 73, 94
Scales 2, 11, 42, 72, 80, 115
Screening Equipment 23, 91
Screens 26, 105
Screwdrivers 55, 99
Screwdrivers, Power 81
Screws 21, 25, 30, 65, 67, 72, 75, 105, 111
Seals & Sealants 6, 61, 71
Separators 68
Sharpeners, Saw 1, 112
Shears 40, 44, 96, 101
Shoes, Safety 2
Shop Equipment 14, 37, 42, 49, 63, 83, 84, 98, 104, 106
Shredders 113
Silicones 70
Sleeves & Boots 12
Slings & Fittings 8, 44
Snow Plows 73
Snubbers, Exhaust 92
Soldering Equipment & Materials 10, 23, 45, 63, 84, 87, 120
Solenoids 29, 44, 76
Speed Reducers 3, 9, 27, 52, 56, 70, 84
Spools 25
Spray Equipment 51, 56
Springs 10, 68
Sprockets 94, 116
Stampings 40, 72, 74, 116
Stapling Equipment 17, 40, 60
Steel 81, 86, 110, 112
Step Block & Clamp Sets .. 71
Straighteners 58
Strapping, Steel 112
Strippers 53, 103
Strippers, Wire 16
Stud Drivers 7
Sweepers 36
Sweepers, Power 109

T

T-Nut & Stud Sets 71
Tackers 17, 40, 60
Tanks 67, 83, 89, 114
Tanks, Compound Melting 13, 81
Tape, Industrial 16, 19, 45, 84, 107
Television, Industrial 100
Testing Equipment 6, 7, 27, 52, 54, 57, 65, 78, 92, 96, 100, 106, 108, 109, 112, 115
Thermometers 44, 65
Timing Devices 6, 17, 32, 40, 52, 69, 77, 85, 89, 108, 112
Tires, Industrial 23, 25, 27, 102
Tools, Cleaning 11
Tools, Cutting 1, 8, 24, 26, 34, 35, 37, 39, 41, 59, 61, 85, 99, 108, 110
Tools, Diamond 78
Tools, Hand 73, 88, 109
Tools, Pneumatic 37, 38, 44, 47, 54, 83, 98, 108
Tools, Portable Electric 59, 65, 92, 113
Track & Accessories 96
Tractors, Industrial 87
Traps, Air & Steam 17, 87
Trucks, Hand 16, 33, 34, 63, 78, 95, 98, 101, 108
Trucks, Industrial Power ... 19, 23, 25, 32, 43, 47, 48, 51, 54, 60, 77, 82, 97, 102, 103
Tubing & Fittings 7, 21, 22, 25, 27, 57, 66, 67, 107
Turret Heads, Drill Press .. 14

U

Ultrasonic Equipment 29, 90

V

Valves 6, 13, 14, 18, 24, 27, 29, 33, 43, 49, 52, 69, 70, 71, 82, 83, 85, 89, 95, 102, 103, 104, 105, 107, 111, 113, 116
Ventilating Equipment 50, 65
Vibration Absorbers 50, 72, 95, 97, 107
Vibrators 43
Vises 62, 64, 84, 89, 97, 98, 107

W

Washers 18, 72
Washers, Car 13
Washroom Equipment ..19, 56, 85
Water Coolers 55
Water Heaters 3, 45, 55
Water Treatment 5, 60, 113, 117
Welding Equipment 2, 4, 12, 28, 34, 58, 70, 82, 102, 112
Wheels, Industrial 15, 25, 36, 69, 78, 93
Winches 67, 86
Winding Equipment 70, 91
Wire 102
Wire Cloth & Screen 11, 21, 37, 82
Wire, Electric 22, 100, 116
Wire Specialties 71, 112, 116
Wiring Devices 20, 26, 53, 65, 79, 90, 95, 100, 111, 112
Workbenches & Tops ..39, 54, 106
Wrenches 5, 73, 88

NOW! A NEW CONCEPT IN PLATE MAGNET DESIGN...

New STEARNS Magman

Plate Magnet Boosts Efficiency 2½ Times

The new Stearns Magman plate magnet with exclusive OFFSET air gap feature removes tramp iron as efficiently as much larger units costing twice as much.

FREE BOOKLET HELPS YOU SELECT YOUR OWN MAGMAN

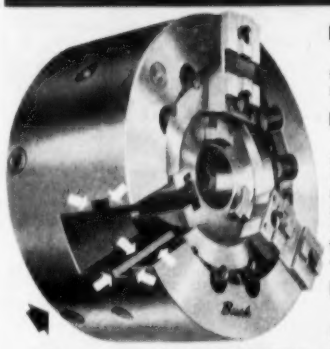
You can select your own Stearns Magman plate magnet for your conveyor system. Write today for free, new booklet telling you exactly how to choose the right size and type. Specify bulletin 50

STEARNS MAGNETIC PRODUCTS

635 South 28th Street • Milwaukee 46, Wisconsin

For more details circle NED-1160 K7 on enclosed inquiry slip

How do you judge power chuck values?



By Accuracy?

.001" is *guaranteed* with this chuck — on new runs and re-runs, *without re-truing jaws.*

By Pieces Per Day?

You can make drastic cuts in down-time with the Buck. Top jaws can be machined in the tool room — hardened — and fitted *in minutes.* Final accuracy adjustment is made under actual operating conditions *with full air pressure.*

By Chuck Life?

Hardened key ways greatly prolong production service. The Ajust-Tru principle helps compensate for wear.

Buck AJUST-TRU POWER CHUCK

Hardened Key Ways Standard Feature

A Buck *plus* at no extra cost. Combined with hardened top jaws (made practical by the Buck for all operations) you can run thousands more pieces than with conventional chucks. Chuck sizes are: 6½", 8¼", 10", 12" — made with 2 or 3 jaws.

The patented Buck Ajust-Tru principle makes such unusual performance possible. Write for full details today. *You can't beat chucking with a Buck.*

Send for a new Catalog today

BUCK TOOL COMPANY

1022 SCHIPPERS LANE • KALAMAZOO, MICH.

For more details circle NED-1161 K7 on enclosed inquiry slip

UNUSUAL OPTICAL BUYS

INFRARED SNIPERSCOPE TELESCOPE & PARTS

See in the dark—without being observed. War surplus Sniperscope M-2. Gov't cost about $1200. Used for industrial plant security; research lab experiments; infrared photography; spectroscopy, etc. Instrument complete, ready to use. Includes Power Pack, infrared light source. Will operate from 6 V auto battery. Battery or transformer available.

Stock No. 85,053-AE $150.00 f.o.b.
Shpg. Wt. approx. 12 lbs. Barrington, N. J.

Save still more money! Build your own Sniperscope! We will furnish instructions—parts, including: Power Packs, 1P25A image tubes, light units, filters, etc. For details—request FREE Bulletin A-26-AE

Order by Stock No. Send Check or M.O.—or order on open account.

SILICONE POLISHING AND CLEANING CLOTHS

New! Saving industry thousands of dollars. Combines the miracle of Silicones with a non-woven, all rayon cloth. Used over and over (washable) to dust, polish, protect, anti-fog; mirrors, reflectors, lenses, coated optics, crystal glass, lucite, other plastics. Won't scratch. Lintless, non-oily. Try sample package. Cloth size 18" x 16".

Stock No. 60,059- AE —Sample Package, 3 cloths ..... $1.00 Postpaid
Stock No. 70,137- AE —Package of 100 cloths ..... 26.50 Postpaid

Lower prices on larger quantities

Order by Stock No.
Send Check or M.O.—or order on open account.

SWIVEL-CLAMP MAGNIFIER

This large 4" diameter magnifier will easily clamp onto any regular or fluorescent lighting fixture. With two ball and socket joints you can swivel it to any position. Large 4" ground and polished lens is +5 dioptre, 8" focal. Use both eyes—see an image with depth to it.

Stock No. 30,249- AE ..... $4.00 Postpaid

Order by Stock No. Send Check or M.O.—or order on open account.

FREE! Giant CATALOG of OPTICAL BUYS!

OVER 1,000 OPTICAL ITEMS . . . Many on-the-job helps . . . quality control aids! 72 pages — hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research labs, experimenters, hobbyists. No obligation. Write for FREE Catalog AE

Send Check or Money Order, Or Order on Open Account

EDMUND SCIENTIFIC CO., Barrington, N. J.

For more details circle NED-1162 K7 on enclosed inquiry slip

(HINT: They're not Chinese coins or old street car tokens)

★ CLUE NO. 1	★ CLUE NO. 2	★ CLUE NO. 3
They remain flat, retain their characteristics of long wear — remain tough under stress of pressure or heat.	Designed as the only wearing, moving part of a piece of equipment used for connecting and controlling machinery and its source of power.	They are one of only three prime parts of that piece of equipment.

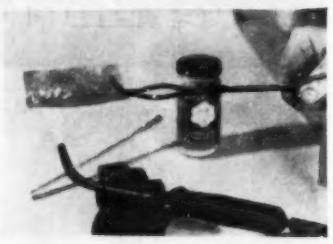
If your answer is friction linings from Stearns electromagnetic clutches — you're right!
Over 100 standard clutches and clutch-brake combinations for matched-to-the-machine performance. 16

Stearns ELECTRIC CORPORATION 129 NORTH BROADWAY • MILWAUKEE 2, WISCONSIN

For complete data on Stearns electromagnetic clutches, call your local Stearns sales representative—or write for bulletin 226-ED.

For more details circle NED-1163 K7 on enclosed inquiry slip

ALL METAL LIQUID SOLDERING FLUX



New liquid aluminum soldering flux makes possible sweating on aluminum, stainless steel, monel, copper, brass, steel, or any combinations of same. The newly developed liquid chemical actually breaks the surface oxide on all types of aluminum so that a sweat job is possible in the same manner as ordinary flux on the common metals. Called Liquid ASMC Flux it makes possible the soldering together of such dissimilar metals as stainless steel to aluminum or any combinations of the above metals to aluminum or each other. When used in combination with Farrelloy All Metal Solder the Flux eliminates the electrolytic action between dissimilar metals so that a permanent bond, highly resistant to corrosion is obtained. ASMC Flux makes possible the use of induction heat as well as torch or iron. Production jobs using induction heat are now being accomplished putting two brass studs on Aluminum Name Plates at the rate of 250 per hour. Same flux when used with Farrelloy Solder is equally effective on filling in blow holes in aluminum castings, sweating name plates on cast iron, and many other jobs. ASMC Flux is priced at $3.50 per pound, fob Philadelphia. Farrelloy Solder $2.00 per pound, fob Philadelphia (14 bars to the pound). Write **Farrelloy Company,** Dept. NED, 1246 North 26th St., Philadelphia 21, Pa. *Advt.*

For more details circle NED-1164 K7 on enclosed inquiry slip

CLOGGED SEWERS!
Remember the costly plumbing bill

Chicago, October 1st. Just introduced is a Free Booklet on machines which enable the Home Owner, Janitor or Factory Maintenance Man to Rod-it-himself.

Yet anyone can operate this new Rodding Tool which is whirled down the drain in a few seconds. SINKS, BATHTUBS, TOILETS, URINALS, FLOOR DRAINS, HOUSE TO STREET SEWERS can be cleared of Rags, Grease, Paper, Sand, while cutter blades can be added for removing roots. A new discovery in Swedish Music Wire gives the rod 100% more Flexibility.

Another new unit is the Miller Electric Rodder which has patented cutters that expand automatically to the size of the pipe. It will clean out heavy obstructions in pipe diameters 2" to 12". Smaller sizes available. But now, what are these tools worth in COSTLY PLUMBING BILLS SAVED. Tear this ad out, fill in coupon and mail for FREE BOOKLET on Hand and Electric Units. Obey that urge. No agent will call. A postcard will do. Chicago phone: Kildare 5-1702.

ADVERTISED NATIONALLY

Electric Unit cleans pipes 3" to 12" 500 ft.

ATTACHABLE CUTTERS FOR HAND AND ELECTRIC UNITS

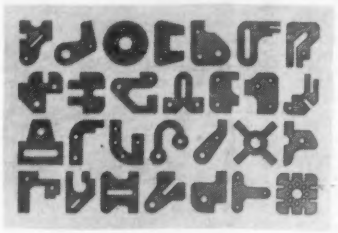
FOR HOME AND INDUSTRIAL USE

MILLER SEWER ROD, Dept. N.D.O., 4642 N. Central Ave., Chicago 30, Ill.
Please send FREE BOOKLET on Rodding. I am not obligated.
NAME .....
FIRM .....
STREET ..... CITY ..... STATE .....

For more details circle NED-1165 K7 on enclosed inquiry slip

New Processes & Materials

THIN METAL PARTS
produced by photo-etching process



Thin metal parts in shapes too intricate for stamping can be made by the photo-etching process to tolerances of ±0.002 in. Process starts with a large, inked drawing of the part which is then photographed onto sheets of sensitized metal up to 0.016 in. thick. Parts are etched free of unwanted surrounding metal. Economical for short runs and product development work, process is also feasible for large scale production of many items. No burr is left by the process. Service is offered by **Randolph Co.,** Dept. NED, 1018 Rosine St., Houston, Tex.

For more details circle NED-1166 K7 on enclosed inquiry slip

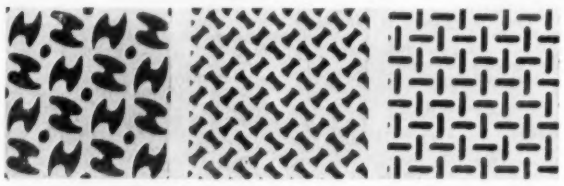
ALUMINUM COMPOUNDS
for roof, calking, and glazing uses

Handi-Gard line of protective aluminum products includes fibered and nonfibered aluminum roof coatings, aluminum roof paints, and aluminum paints. Products supplement Handi-glaze and Handi-calk aluminum glazing and calking compounds. Made by **Gibson-Homans Co.,** 2346 Woodhill Rd., Cleveland 6, Ohio.

For more details circle NED-1167 K7 on enclosed inquiry slip

PERFORATED METAL
three new patterns added to line

Fantasy, Ripple and Plaid designs, shown left to right, have been added to line of perforated metal patterns. These perforations can be furnished in light



gage steel, aluminum, brass, and copper. Pieces can be specified as to size or shape, or can be custom perforated with or without margins. Color anodized or brushed and lacquered finishes are offered on aluminum, whereas steel patterns can have painted, chrome plated, enameled, japanned, or other bake-on finishes. Made by **Harrington & King Perforating Co.,** Dept. NED, 5655 Fillmore St., Chicago 44, Ill.

For more details circle NED-1168 K7 on enclosed inquiry slip

SAVE TIME & MONEY ON INSPECTIONS

FINE, AMERICAN-MADE INSTRUMENT ... AT OVER 50% SAVING

STEREO MICROSCOPE
FOR INDUSTRIAL OR HOBBY USE

Up to 3" Working Distance — Erect Image — Wide 3 Dimensional Field

FULL PRICE $99.50 F.O.B.

Now, ready after years in development—this instrument answers the long standing need for a sturdy, efficient STEREO MICROSCOPE at low cost. Used in production—in research—in the lab, shop, factory, or at home; for inspections, examinations, counting, checking, assembling, dissecting—speeding up and improving quality control. 2 sets of objectives on rotating turret. Standard pair of wide field 10X Kellner Eyepieces give you 23 power and 40 power. Additional eyepieces available for greater or lesser magnification. A low reflection coated prism erecting system gives you an erect image—correct as to right and left—clear and sharp. Helical rack and pinion focusing. Interpupillary distance adjustable. Precision, American-made storage chest included. WE WILL SHIP ON 10-DAY FREE TRIAL.

Order Stock No. 85,039-AE ..... full price ... $99.50 f.o.b.
Shipping weight approximately 11 lbs. Barrington, New Jersey

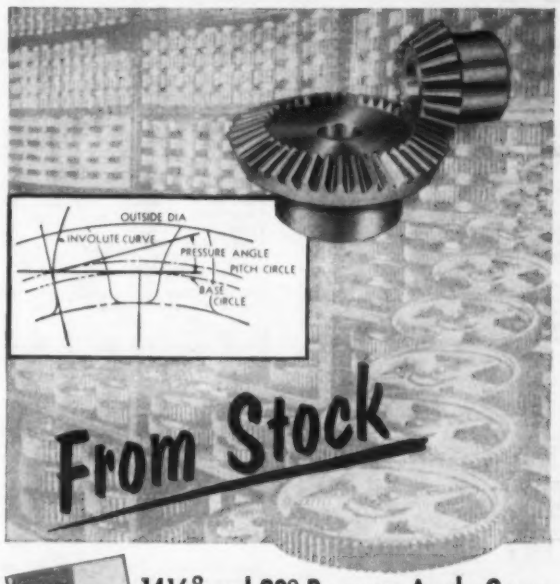
Send check or M.O.—or order on open account

WE'LL SHIP ON 10-DAY FREE TRIAL SATISFACTION OR MONEY BACK

FREE! Giant CATALOG of OPTICAL BUYS!
OVER 1,000 OPTICAL ITEMS . . . Many on-the-job helps . . . quality control aids! 72 pages — hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research labs, experimenters, hobbyists. No obligation. Write for FREE Catalog AE

EDMUND SCIENTIFIC CO., BARRINGTON, N. J.

For more details circle NED-1169 K7 on enclosed inquiry slip



14½° and 20° Pressure Angle Gears

All Ohio Stock Gears have a generated tooth form for stronger, quiet, and smoother running performance. AVAILABLE IN 14½ DEGREE OR 20 DEGREE PRESSURE ANGLE. Spur gears, 3 to 64 Pitch; worm gears, 3 to 32 Pitch; bevel gears, 3 to 16 Pitch; miter gears, 4 to 32 Pitch; helical gears, 6 to 24 Pitch.

SEND FOR OHIO GEAR'S NEW HANDBOOK containing 186 pages of valuable charts, tables and formula to help you select the right drive.

ESTABLISHED 1915
THE OHIO GEAR COMPANY
1320 East 179 Street Cleveland 10, Ohio

For more details circle NED-1170 K7 on enclosed inquiry slip

CUT PRODUCTION COSTS!
MARK
NAME PLATES
5 TIMES FASTER

MODEL EMT-1
ELECTRIC TAG TYPEWRITER
A touch of the finger delivers up to 2 tons pressure for deep, legible impressions in metal or plastic tags.

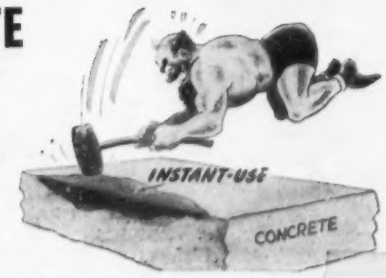
—WITH—
Automark
ELECTRIC TAG MARKING MACHINES

MODEL SRST-2
HI-SPEED
TAG MARKING MACHINE
Automatically marks BOTH constant and serial numbers at any desired speed up to 8,000 tags per hour!
MANUFACTURERS' AGENTS
Some Territories Still Available
Send Now for Bulletin

DEFIANCE MACHINE & TOOL COMPANY
1920 S. VANDEVENTER Dep't. QD ST. LOUIS 10, MO.

For more details circle NED-1171 K7 on enclosed inquiry slip

INSTANT SETTING
CONCRETE FLOOR PATCH



TEST IT ON TRIAL OFFER

TOUGH AS NAILS! FAST!

Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut — tamp smooth — truck over! No waiting! INSTANT-USE bonds tight to old concrete — right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floors are badly chewed up. Used indoors or out. Immediate shipment.

MAIL COUPON for TRIAL OFFER and FREE BROCHURE

INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert St., Philadelphia 1, Pa.
Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and Free INSTANT-USE BROCHURE—no obligation. (Clip and attach Coupon to Co. letterhead.)
Name .....
Title .....
Company .....
Address .....

For more details circle NED-1172 K7 on enclosed inquiry slip